

# THE NECESSITY OF IMPLEMENTING THE CONCEPT OF “MILITARY MOBILITY” AT THE NATIONAL LEVEL FOR THE DEPLOYMENT OF FORCES PARTICIPATING IN OPERATIONS BY LAND

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DOI: 10.55535/RMT.2025.3.31

*Current threats to international security are stronger than at any point in recent history, and the member states of NATO and European Union have an obligation to take the most effective measures to protect their citizens. Defensive actions must be continuously conducted in order to prevent a potential state of conflict, and the development of military mobility by the member states represents an immediate task within the current international configuration. Each NATO and/or EU member state is responsible to implement, at the national level, projects and programs ensuring the rapid deployment of military equipment, vehicles and materials across the transatlantic space. Regardless of the nature of the operation, military forces must benefit from all necessary conditions, in terms of logistics and military mobility, to be deployed in a timely and secure manner anywhere within the territory of the allied or partner states.*

*Keywords: force deployment; military mobility; dual-use infrastructure; Security Action for Europe; interoperability;*

## INTRODUCTION

The reassessment of NATO and the EU’s capacity to defend against a possible military threat originating from the East has become a priority for these organizations, as well as for each individual state. The conflict provoked by Russia in Ukraine in February 2022, along with more recent geopolitical and geostrategic challenges, such as the redefinition of national objectives and priorities and the growing trends that elevate nationalism as primary resource in European political sphere (Lăzărescu 2024) represent significant security concerns that impact global peace and stability.

In the current situation, both NATO and the EU find themselves compelled to reorient their policies and ensure that they can fulfill their roles as structures able to generate security. Despite peace treaties and guarantees, Russia has always represented a source of danger and concern, particularly for the countries in its vicinity, located on the Eastern Flank of Europe. In order to adequately respond to the challenges and threats periodically posed by Russia, the two organizations have taken concrete measures to maintain security on their territory since February 2022.

On July 1, 2024, NATO, an alliance founded on the principles of deterrence and defense, completed its transition to a *new force structure (NATO Force Model)* (SHAPE Public Affairs Office, 2024): a multinational, highly technologized and readiness-oriented structure, capable of operating across all domains and deploying rapidly to any location. The decision to transform the NATO Response Force (NRF) into a new model was made at the 2022 Madrid Summit, with the goal of increasing the number of available and ready forces, to be used in the Allies’ defense plans (NATO 2025). Furthermore, NATO deployed four new battlegroups in Bulgaria, Hungary, Romania and Slovakia, in addition to the four already established in Poland and the Baltic States. These battlegroups are part of the enhanced Forward Presence (eFP), have brigade-level strength and consist of military forces contributed by member states on a rotational basis (Palavenis, 2025). These measures are intended to validate the Alliance’s strength and capability, yet they also place significant logistical pressure on the deployment of such a large number of forces.

Although the Alliance has revised its force employment plans precisely to demonstrate commitment and collective effort, the EU, in turn, has been compelled

to decide on rearmament and the strengthening of its military posture in the shortest time possible, as a result of the unpredictability of the United States (US) which has been undergoing both internal and external transformations following the inauguration of the Donald Trump's administration (Naumescu, 2025).

As early as 2022, within the framework of the Strategic Compass, the European Union launched the idea of creating a European Union Rapid Deployment Capacity (EU RDC), designed to enable the organization to rapidly deploy up to 5.000 troops to participate in various types of operations (Meyer, Van Osch, Reykers, 2022). However, considering all recent security changes, the member states initiated the „*ReArm EU*” project, aimed at maintaining a safe and stable environment for citizens through military means, in the event of a deterioration of transatlantic relations and a reduction in the capacity of Western states to defend the Eastern Flank against Russian Federation (European Commission 2025). This plan, detailed in a key Union document: *White Paper for European Defence – Readiness 2030*, stipulates the use of available financial resources to mobilize up to 800 billion dollars in defense investments. The goal of the Readiness 2030 initiative is to ensure that the European defense industry possesses the capacity to produce armaments at a rate and scale consistent with current security requirements, as well as to facilitate the rapid deployment of forces across the entire European territory (Santopinto, 2025).

The measures adopted by NATO and the EU exemplify the current security environment and contribute to the evolution of military mobility not only at the multinational level, but also nationally, as each state acknowledges the necessity of developing procedures, projects and mechanisms to enable the rapid movement of forces across its territory, thereby ensuring their defense.

This paper aims to examine both these security aspects and the measures adopted by the two organizations to ensure them, while also substantiating the need to implement a coherent military mobility system in Romania, dedicated to land operations.

The analytical structure of this paper will begin with the establishment of a theoretical foundation in the field of military mobility, through the presentation of the main concepts, definitions and relevant distinctions. Subsequently, we will analyze the current state of military mobility implementation at the national level by assessing Romania's existing capabilities, identifying major disfunctions and highlighting concrete examples. Next, we will emphasize the necessity of integrating an efficient military mobility system by outlining the main advantages identified, as well as the associated risks. We will then formulate proposals for appropriate measures and policies, correlated with the data obtained from our analysis

and finally, we will draw relevant conclusions for this field. The entire study will be based on a research method appropriate to the proposed objectives> documentary analysis.

The sources in this research include scientific articles and studies by Romanian and foreign authors, books, reports, official statements and studies produced by NATO, the EU or agencies specializing in military mobility. In addition, military regulations with a low classification level are analyzed. Certain methodological limitations are anticipated, arising from the inaccessibility of sensitive military information due to the protection of ongoing projects.

## THEORETICAL FOUNDATIONS OF MILITARY MOBILITY

Theoretically, an essential first step consists of defining the concept of military mobility in a broad sense. In general understanding, this term is associated with “*the ability to move military personnel and equipment over various distances, including across borders*” (Cokelaere, 2022). It is important to present this concept from the perspective of NATO and EU doctrines, as these definitions are universally accepted by all member states and reflect the shared vision in this field.

From the EU’s perspective, military mobility represents a current strategic challenge, linked to the need for the rapid and secure deployment of forces. According to the official definition, military mobility refers to “*the movement of military personnel and assets from one place to another, including cross-borders by using different modes of transport.*” (EDA, 2019).

In the context of the organization’s eastward expansion, the use of dual-use infrastructure and the reduction of bureaucratic obstacles are essential to ensure uniform economic, social and security conditions across the entire Union. The organization has been the main actor to recognize the importance of the rapid movement of forces and military equipment throughout its territory and has adopted a series of projects, regulations and initiatives aimed at optimizing the deployment process.

The European Union plays a major role in funding the development of dual-use infrastructure through the Connecting Europe Facility/CEF component, which aims to harmonize transport networks between the Western and Eastern, as well as the Northern and Southern regions (Bellomo, 2023).

Furthermore, the Security Action for Europe (SAFE) instrument, adopted on May 27, 2025 (European Union 2025), within the „*ReArm*” Europe program, provides member states with access to approximately 150 billion euros for urgent investments aimed at strengthening defense capacity. *Military mobility* has been

identified by the EU as a priority area to be addressed, fully or partially, through these funds. Projects related to force deployment, logistics and dual-use infrastructure can be implemented through the SAFE mechanism. For projects submitted by July 2025, Romania is expected to receive approximately 16.7 billion euros.

NATO likewise demonstrates an increased interest in this field and has launched several initiatives aimed at facilitating cross-border movements, reducing bureaucracy, increasing movement speed and standardizing transport infrastructure across the transatlantic area. In the context of intensified military exercises, particularly along the Eastern Flank, the importance of rapid force mobility has become increasingly evident, as military convoys often face challenges such as narrow roads, limited railway capacity, incompatible rail gauges or excessive administrative procedures. The interest in *military mobility* is also reflected at the doctrinal level, through its integration into operational concepts and strategic planning processes. In this regard, NATO defines military mobility as “a quality or capability of military forces which permits them to move from place to place while retaining the ability to fulfill their primary mission” (Ministry of Defence, 2021), a definition that generally reflects the EU’s approach.

Romania, as a member state of both the EU and NATO, aligns itself with the strategic directions promoted by these organizations in the field of *military mobility*. Thus, an increasing interest can be observed in implementing policies and initiatives focused on the development of dual-use transport infrastructure, the simplification of bureaucratic procedures, the digitalization of logistical processes and the use of emerging and disruptive technologies (EDT) aimed at optimizing military mobility.

Currently, at the doctrinal level, Romania does not have an official definition of the concept of *military mobility* and academic efforts dedicated to in-depth research in this field remain, for the time being, limited.

Returning to the theoretical foundation provided at the level of international organizations, it is essential to present and distinguish between the three types of military mobility: *strategic, operational and tactical*.

*Strategic mobility* is defined by NATO as “the capability to move forces and their associated logistics in a timely and effective manner over long distances. This could be between joint operations, areas, between regions, or beyond NATO’s area of responsibility.” (NATO, 2020). During the conduct of NATO operations, national military capabilities can be strengthened through multinational cooperation and commitment, support from multinational military agencies and collaboration with private entities. The success of operations depends on the quality and number

of embarkation and debarkation points within or from the deployment area, as well as on the efficiency of the transport infrastructure used (NATO, 2022). Strategic mobility refers to the projection of forces over long distances, typically between countries or continents.

*Operational mobility* refers to „the movement of forces between or within theatres of operations for the purpose of regrouping, reinforcing or repositioning forces in support of the conduct of a military campaign.” (NATO, Allied Joint Doctrine for the Conduct of Operations AJP-3 2019).

*Tactical mobility* is “the ability to move rapidly from one part of the battlefield to another, relative to enemy.” (Ib.). It is the closest to the commander’s immediate decision-making level and is essential for the success of a mission. Its effectiveness depends on rigorous planning that takes into account factors such as terrain topography, infrastructure condition and the technical and tactical characteristics of military equipment.

One of the main challenges hindering the military mobility of forces is critical infrastructure, particularly *transport infrastructure*. Current plans developed at the European and Euro-Atlantic levels focus precisely on the development of transport infrastructure and capabilities that are capable, secure, sustainable and resilient, in order to support weight, dimensions and scale of modern military equipment.

Modernizing dual-use transport infrastructure along the trans-European transport network (TEN-T), which spans the entire territory of the Union, is a priority to ensure that this network can support high-tonnage and complex military transports on short notice. Although Romania faces significant deficiencies in the quality of its transport network, particularly in the Eastern and Southern regions, it is making continuous efforts to address these gaps. According to the European Commission, Romanian authorities have accelerated the implementation of projects targeting dual-use military mobility to facilitate the rapid, efficient and coordinated movement of military equipment and personnel (Comisia Europeană, 2022). This course of action is essential for ensuring the optimal conduct of planned multinational military exercises on national territory, in accordance with the strategic agenda of the North Atlantic Alliance.

## CURRENT STATE OF DUAL-USE MOBILITY, AT THE NATIONAL LEVEL

Romania is an European state that, due to its geographic position, possesses all major forms of transport: road, rail, air, maritime, inland waterways and intermodal. However, the degree of implementation, interconnection and modernization of its transport network has not progressed at the pace required by emerging security challenges and contemporary operational dynamics.

With a significant geostrategic position within the EU and NATO, Romania has become a key focus for the development of dual-use transport networks, both for national authorities and for allied or partner states. In this context, the number of infrastructure projects compatible with the TEN-T network requirements, as well as with the specific needs of military mobility, has increased. These projects contribute to facilitating the rapid access of foreign military forces anywhere within national borders, strengthening the Alliance's response capability in the region.

From the perspective of *road infrastructure*, the latest statistics from 2024 show that the public road network totals nearly 88.000 km, of which over 1.300 km are highways and expressways, more than 17.600 km are national roads, over 35.000 km are county roads and the remainder are communal roads (Pislaru, 2024). Due to funding for infrastructure expansion allocated both from the EU budget and the national budget, Romania's infrastructure has begun to provide much better connectivity between the country's regions, although some projects still need completion, particularly in the Moldavia region and in the southwestern part of the country. In the current geopolitical and strategic context, the road network is essential for NATO forces' military mobility, logistic transit for the Eastern Flank and the increased frequency of international military exercises and transports.

From the perspective of *rail infrastructure*, Romania faces a high degree of technological wear. Most of the national railway network was built during the communist era and modernization efforts in recent decades have been limited and sporadic. Currently, the network extends over 10.000 km, but only approximately 4% is electrified, placing Romania well below the European average in terms of quality and performance of the rail transport system. For example, the average commercial speed for freight transport is about 15 km/h, while for passenger transport it is 45 km/h. In contrast, the EU average is 45 km/h for freight and 123 km/h for passengers (Mușat, 2023). Nevertheless, Romanian authorities are attempting to revitalize the railway sector, particularly in terms of its capacity to support dual-use mobility. A recent example is the launch of Carpatica Feroviar SA (Horpeniakova, 2024), a company dedicated to freight transport with dual-use capabilities. In addition, a process has been initiated to replace aging train units with modern ones, adapted to both domestic and European interoperability requirements.

From the perspective of *air infrastructure*, Romania is in a significantly more favorable position compared to other modes of transport. Nationally, 28 aerodromes and 6 heliports are operational, strategically distributed across the country, allowing for both cargo and passenger transport, including in the context of strategic logistical operations. The largest national airport is Bucharest "Henry Coandă" International

Airport, which has undergone extensive modernization to align with international standards. Romania, like other EU members, participates in the Single European Sky ATM Research/SESAR program, which represents the technological and operational component of the Single European Sky/SES initiative. The program aims to integrate and optimize air traffic management through digitalization, interoperability and the use of advanced technologies, thus contributing to strengthening air security and mobility within the EU (ROMATSA, w.y.).

From the perspective of *maritime infrastructure*, Romania possesses significant strategic potential due to its direct access to the Black Sea and its favorable position along international transport routes. Constanța, Mangalia and Midia are three major seaports, each playing a complementary role in managing cargo, passenger traffic and industrial activities.

Constanța Port is the largest national port and one of the most important in Eastern Europe, due to its logistics capacity and intermodal connections. It serves as a strategic entry point for commercial flows to and from the EU and is connected to the central network of the TEN-T Rhine-Danube corridor. In recent years, Romanian authorities have launched major investments projects to modernize port infrastructure, which had been neglected in the post-communist era. These initiatives aim to increase operational capacity, digitalize logistical processes and adapt ports to new security and energy-efficiency (Drăgan, Olteanu, Stângă, 2022). Given its European commitments, Romania is obliged to align its maritime infrastructure with EU standards, particularly regarding dual-use infrastructure and the support of mobility in the Black Sea region.

From the perspective of *inland waterway infrastructure*, Romania has a geographical advantage due to the Danube River, which crosses the national border from West to East over a length of 1.075 km. along this segment, several strategically important river ports are located, enabling commercial and logistical activities. Additionally, there are approximately 1.500 km of other navigable inland waterways (secondary branches of the Danube, the Danube-Black Sea Canal, the PoartaAlbă-Midia-Năvodari Canal and the Bega Canal), which contribute to an extensive navigable infrastructure with dual-use potential.

Although during dry summer periods river transport faces challenges, if authorities ensure proper maintenance, dredging and modernization of the inland waterway infrastructure, this sector can be used not only for civilian cargo transport, but also as an additional route for moving military equipment and assets, particularly in the context of the need for diversified and redundant logistics at the regional level (Păvălașc, 2022).

From the perspective of *intermodal infrastructure*, Romania is undergoing a process of expansion and consolidation of this essential component of modern logistical mobility. Its favorable geographical position at the intersection of key European corridors, provides the country with significant potential for developing intermodal hubs, particularly through the integration of road, rail, air, maritime and inland waterway transport. Direct access to the Black Sea, via the Port of Constanța, strengthens Romania's role within the TEN-T and facilitates the integration of international logistical flows. The intermodal network is aligned with the TEN-T corridors crossing the national territory: Rhine-Danube and Orient-East Med.

Nowadays, many of the intermodal terminals in operation or under development are managed by private operators, investing in modern logistics platforms near major transport arteries. At the same time, national authorities have begun supporting the development of integrated logistics centers through EU-funded projects. This evolution confirms the importance of intermodal infrastructure as a key element of dual-use mobility, capable of supporting both civilian trade requirements and the operational needs of military mobility in the European context.

Although substantial efforts have been made in recent years to develop dual-use infrastructure on national territory, in line with international commitments, domestic economic realities continue to limit the pace of implementation. In this context, a number of structural and administrative dysfunctions persist, which affect the efficiency of military mobility within national borders.

Firstly, the issue of *functional interoperability between civilian and military structures* has not yet been resolved. Although military mobility has become an increasingly prominent topic on the national security agenda, there is currently no coherent standardization of the relationship and cooperation procedures between the Ministry of National Defense (MoD) and other institutions responsible for transport and logistics infrastructure, such as Ministry of Transport and Infrastructure (MTI), the Ministry of Digitalization, the Ministry of Finance or other private-sector actors. In the absence of a consolidated regulatory framework, information exchange and inter-institutional coordination are carried out primarily at the initiative of MoD, through ad-hoc mechanisms such as interministerial working groups, cooperation protocols, administrative arrangements or bilateral agreements. In times of crisis, this reactive and fragmented approach limits rapid response capability and reduces the overall efficiency of dual-use infrastructure.

Secondly, the remains of *a high level of bureaucracy* in the approval of military transports, particularly foreign ones. In the event of a conflict or crisis on the Eastern Flank, the Alliance's ability to rapidly deploy forces, equipment and military

materials to the area of interest is vital to ensuring an effective response. Currently, however, the administrative procedures and authorizations required for foreign military convoys to transit national territory are cumbersome, fragmented and uncoordinated. Oversized transports, such as tanks or artillery systems, must go through a series of customs and security formalities. These issues highlight the urgent need for harmonization and standardization so that cross-border transfer can be carried out quickly, safely and efficiency in the event of an operational emergency.

Thirdly, there are *no officially designated military routes* for the movement of military convoys on national territory. Military transports are carried out predominantly along the TEN-T corridors. However, these corridors also serve civilian freight and passenger traffic. Although the corridors meet over 94% of military requirements, frictions still exist regarding the special transport needs of certain oversized equipment, substances that must be transported under specific conditions or equipment that must be moved as quickly as possible to particular locations. Civilian traffic or restrictions on certain segments can pose obstacles. Therefore, identifying, testing and marking routes suitable for military mobility, along with establishing civil-military coordination mechanisms for their allocation would represent an important step toward increasing operational efficiency.

Eloquent examples highlighting dysfunctions in military transport on national territory are the case of the Ungheni Bridge (at Romania’s border with the Republic of Moldova) and the railway bridge at Negru Vodă.

The road and railway bridge at Ungheni holds significant strategic importance for military mobility within the national territory. It serves as a strategic link between Romania and the Republic of Moldova, facilitating the rapid transit of troops and military equipment between the two states. The bridge is part of the military mobility infrastructure and supports the conduct of exercises and international military cooperation, by providing direct connectivity with Moldova for joint Romanian-Moldovan or international exercises. Despite its importance, the construction of the bridge has been delayed. Its connection to the existing infrastructure is uncertain (the bridge will be part of the A8 highway, but the final route of it links to other roads and other connections are not fully established). Feasible timelines for execution and operation are unrealistic, the size and capacity may be limited for certain scenarios and building it at the border presents logistical and security challenges (Borcea, 2025).

The railway bridge at Negru Vodă, located along the route toward the Smârdan training area currently does not meet the requirements for military mobility.

During the NATO exercise Steadfast Dart 2025, held in January-February 2025, infrastructure limitations were reported: several military convoys of allied forces could not cross the bridge according to the planned itinerary, due to insufficient vertical clearance that prevents the passage of large combat vehicles. Consequently, the participating units which were testing the rapid reaction capability of forces were redirected along an alternative route via the Vama Veche border crossing. However, this route is significantly closer to the Black Sea coast and, in the event of a real scenario, may involve an increased operational risk in terms of vulnerability to attack (Matei, Angelescu, 2025).

### **ARGUMENTS FOR THE DEVELOPMENT OF AN EFFECTIVE MILITARY MOBILITY SYSTEM**

In the context of implementing a collective defense system within the transatlantic space, the need for an integrated transport network, characterized by synchronization, coordination and joint monitoring among allied and partner states has become increasingly evident. For Romania, to become a fully integrated actor in international initiatives concerning *military mobility* it must follow a common path with other states and adhere to infrastructure development projects aimed at reducing bureaucratic barriers. From a strategic perspective, mobility brings a series of advantages, such as enhancing the rapid reaction of forces, reducing vulnerabilities, optimizing logistical processes and strengthening Romania's credibility within NATO and the EU.

*The rapid reaction of forces* refers to the ability of armed forces to be deployed within a short period of time to areas where they are needed, particularly in emergency situations, with the aim of deterring or countering potential acts of aggression (Becker, Schulte, 2021). This capability depends on the existence of a modern, interconnected and functional transport infrastructure within each European state. Otherwise, even well-trained and well-equipped forces may face major challenges in terms of mobility, leading to delays in operations and, consequently, increased vulnerabilities and security risks. At the same time, the presence of a rapid reaction force on the Eastern Flank ensures regional stability, sends a deterrent message to potential adversaries and enhances the interoperability of forces.

*Reducing vulnerabilities* through the implementation of an effective military mobility system allows the dispersion of one's own, allied or partner forces located on national territory to different areas for the conduct of planned missions and activities without concentrating troops in fixed locations that could expose them to hostile attacks. When provided with adequate and continuous logistical support,

the ground transport of military forces can be carried out under optimal conditions, within the established timeframes and in accordance with mission specifications.

*Optimizing logistical processes* through improved military mobility is reflected in the ability to rapidly and efficiently support forces on the move by ensuring the timely delivery of critical resources necessary for mission success. This operational efficiency translates into reduced supply times, increased flexibility in the deployment of resources, decreased dependence on fixed logistical points, which can be vulnerable in the current context, and at the same time, lower costs associated with logistical support.

*Strengthening national credibility* within NATO and the EU is directly conditioned by Romania’s ability to ensure the rapid mobility of its own, allied or partner troops. This capability reflects the level of strategic commitment and the seriousness with which the Romania assumes its responsibilities. The state consolidates its position as a reliable partner if it can support the conduct of joint exercises by effectively managing all logistical, bureaucratic and administrative implications. Moreover, the recent commitments in the development of transport corridors together with neighboring states represent evidence of the involvement in regional projects aimed at expanding and modernizing infrastructure dedicated to military mobility (European Defence Agency, 2023).

If the state does not act quickly and in coordination with its partners to develop military mobility, a number of *risks* may arise, that could turn into threats to national security, such as delays in the execution of operations, endangerment of missions and the weakening of international cooperation.

The absence of an efficient military mobility system may lead to *delays in the execution of operations*, which risks resulting in the loss of tactical initiative, delayed defense of vulnerable areas and the inability to provide timely support from allied forces. In the current context, characterized by dynamism and the need for rapid responses, such deficiencies can seriously compromise the effectiveness and cohesion of collective action.

In the absence of adequate infrastructure, there is a risk of *jeopardizing missions*, which translates into exposing forces to unforeseen dangers, especially in situations where they are forced to use unsuitable routes or unprepared infrastructure. In such cases, the consequences can be severe, such as the compromise of strategic objectives if forces arrive too late to protect them, or the improper deployment of troops in areas of interest (Chifu, 2021).

*The weakening of international cooperation* can directly affect national security, as Romania has the obligation to align with the Euro-Atlantic strategic direction.

This responsibility entails concrete commitments: financial, human and institutional, to ensure mobility, security and the logistical support required for forces carrying out missions on national territory (Ioniță, 2020).

Given the threats and risks identified above, it is evident that the adoption of permanent and functional mechanisms to regulate the deployment of military forces is vital, in order to ensure a rapid response in the event of a conflict or crisis on the Eastern Flank of the Alliance. These mechanisms would reduce the forces' reaction times by implementing pre-established, standardized procedures or plans, facilitate the smooth execution of military operations through pre-approved action plans, enhance interoperability among NATO member states and enable better planning of logistical support.

### **NATIONAL MEASURES FOR FACILITATING MILITARY MOBILITY**

Taking into account the aspects analyzed above, we consider that viable solutions exist for implementing the concept of *military mobility* at the national level. The proposed measures primarily aim to strengthen Romania's internal capabilities, while also generating positive effects internationally by directly contributing to NATO's and the EU's collective efforts in the field of *military mobility*. In this regard, we propose the following courses of action:

- Development and adoption of a clear, coherent and enforceable legislative framework at the national level, specifically regulating aspects of military mobility;
- Intensification of inter-institutional cooperation, both at the governmental level and through active involvement of the civilian sector, particularly in the area of critical infrastructure;
- Continuation of the growth rate of investments in dual-use infrastructure;
- Expansion and diversification of military exercises aimed at testing rapid reaction capability, interoperability and the mobility of forces within the national territory.

*The development and adaptation of a clear legislative framework for military mobility* is a vital measure for the continuation and efficiency of projects in this field. In this regard, it is necessary that all institutions involved in ensuring national defense and in facilitating or implementing projects related to transport infrastructure, as well as civil authorities, collaborate according to clear, uniform and well-structured rules. Ministries such as the Ministry of National Defense, Ministry of Transport and Infrastructure, Ministry of Finance, Ministry of Internal Affairs, Ministry of Digitalization, Ministry of European Projects Implementation

and Ministry of Development must cooperate institutionally, following *common procedures or regulations* when executing any project related to military mobility. Complementing this inter-institutional framework, the involvement of the private sector becomes increasingly relevant. Transport companies, developers of artificial intelligence-based autonomous systems and manufacturers of dual-use vehicles should be integrated into cross-sectoral working groups, through the designation of representatives with access to project-related information. Such an approach would contribute to increased transparency, decision-making efficiency and interoperability between institutional actors and the private sector.

*Inter-institutional collaboration and the integration of the civilian component* cannot remain a mere proposal: it must materialize through the creation of effective cooperation mechanisms between state institutions and private sector actors. In this regard, it is necessary to establish a framework for dialogue and coordination, allowing the active participation of all relevant parties in the planning, design and implementation stages of strategic infrastructure projects.

For example, in the development of a highway, the MoD should be consistently represented within interministerial working groups to communicate operational requirements, specific military transport needs and technical standards that should be applied. Such an approach would ensure the compatibility of civilian infrastructure with military mobility needs, while simultaneously reducing the risks associated with later adaptations and ensuring the efficient use of resources.

*Increasing investments in dual-use infrastructure* is a fundamental requirement for the future of military mobility, not only in Romania, but across Europe. Although the Romanian state allocates its own budgetary resources for infrastructure development, a significant share of funding comes from non-reimbursable European funds, particularly through the Connecting Europe Facility (Transport Component), and more recently through the SAFE mechanism. This component provides support from the military mobility envelope, amounting to 1.69 billion for EU member states, under which financing covers up to 50% of eligible expenses (Ministerul Transporturilor și Infrastructurii, 2023). Meanwhile, SAFE contributes to infrastructure enhancement, as over 30% of the projects submitted by Romania are dedicated to military improvements and are expected to receive funding (Dumitrescu, 2025), thereby facilitating military transport along routes soon to become operational. Additionally, NATO and the US, through funding under the NATO Security Investment Programme/NSIP and the European Deterrence Initiative/EDI, provide avenues for revitalizing Romania’s critical infrastructure.

With appropriate expertise, the Romanian state could attract substantial amounts from these programs to rebuild and modernize its transport network, ensuring that it meets dual-use transport requirements.

*The multiplication and diversification of multinational exercises* represent an essential measure for strengthening military mobility in the current context. An analysis of recent trends reveals the planning of exercises aimed at simulating allied intervention to halt a potential conflict on NATO's Eastern Flank, while simultaneously assessing the mobility capabilities of forces within Eastern European states. These countries, including Romania, continue to face infrastructural and administrative challenges that may hinder the efficient deployment of troops and equipment.

Romania has the opportunity to assume a regional leadership role in the organization and coordination of such exercises, by collaborating with neighboring states and other allies. This approach would not only allow for the testing and improvement of national capabilities, but also facilitate the attraction of funds aimed at developing dual-use infrastructure, which is essential for supporting military mobility. Furthermore, the annual planning of multinational exercises, such as Steadfast Defender, Dacian Spring or Dacian Fall can serve as a deterrent instrument against potential adversaries, while also enhancing interoperability and reducing reaction times in the event of regional crises.

## CONCLUSIONS

In the current context of regional and international security, *military mobility* has become an essential pillar of collective defense both at the national level and within strategic alliances such as NATO and the EU. For Romania, the effective integration of military mobility requires not only alignment with international standards, but also the development of a coherent system adapted to national specificities.

Recently, Romania has made significant progress in this field. In July 2025, a portfolio of projects aimed at developing the defense industry and enhancing military mobility was submitted to the European Commission, with funding planned through the European SAFE mechanism. Approximately 30% of these projects focus on improving transport infrastructure and logistic connectivity, which are essential for the rapid deployment of forces. Moreover, Romania has signed regional agreements to develop military mobility corridors in collaboration with countries such as Bulgaria and Greece, aiming to simplify and accelerate the movement of troops and equipment along NATO's Eastern Flank.

## The Necessity of Implementing the Concept of “Military Mobility” at the National Level for the Deployment of Forces Participating in Operations by Land

Furthermore, within the multinational exercises planned for 2025, Romania demonstrated its commitment to strengthening military mobility. For example, Steadfast Dart 25 involved approximately 10.000 troops from 9 nations, testing rapid deployment capabilities and interoperability of allied forces on national territory.

In this context, Romania must adopt concrete measures to integrate military mobility into a coherent national system. This involves developing a clear legislative framework, intensifying inter-institutional and private sector collaboration, investing in dual-use infrastructure and organizing multinational exercises to test rapid deployment of forces. Only through the implementation of these measures can Romania strengthen its position as a reliable partner within NATO and the EU, thereby ensuring national security and contributing to regional stability.

Considering all the information presented so far, we conclude that developing a *national concept of military mobility* is absolutely necessary for Romania, as only an integrated strategic framework, encompassing legislative, logistical, dual-use infrastructure, civil-military cooperation and the adoption of emerging and disruptive technologies can ensure the rapid movement of forces in line with the commitments undertaken within NATO and the EU.

Given the relative novelty of this field, we propose that a future research direction should focus on the integration of artificial intelligence into this concept, as it could significantly enhance predictive analysis capabilities, optimal route planning, real-time logistical management and virtual simulations or exercises. These advancements would translate into shorter reaction times, improved interoperability and greater adaptability to unforeseen developments in the security environment.

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