

PROCUREMENT PROGRAMS CHALLENGES FOR THE SUSTAINABILITY OF THE ROMANIAN MILITARY LOGISTICS

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ABSTRACT

The military logistics is a key element in the military operations and activities, therefore it has to be adapted to the context in which combat and combat support troops evolve, to provide the full range of goods and services, in a sufficient and timely manner. This article explored, using the case study method, the extent to which the current and future procurement programs of the Romanian Army covered the broad range of logistic requirements generated by the actual economic and security context. Building on the large spectrum of logistics functional and related areas requirements, and also on the new strategic visions adopted this year by NATO and the EU, the article highlighted the fact that these strategic trends were in line with the sustainable development goals, on one hand, and also very demanding for the Romanian military logistics. The conducted study reveals a gap in the existing and planned procurement programs, which should be more logistics oriented, and also more focused on meeting the sustainability criteria determined by the context of sustainable development. Moreover, the research points to the need that the national defense industry be activated to include Romania into the military supply chain, to reduce dependencies from external support and enhance resilience.

KEYWORDS: *logistics, military, procurement, program, sustainability.*

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1. INTRODUCTION

The current security context is characterized by unpredictable developments and various threats, such as classic war as well as those in the field of hybrid warfare, attempts to reconfigure the poles of power, rapid spread of false news, climate change and COVID-19 pandemic, which cause economic and social crises, urging to resilience. Added to all this is the emergence of new technologies and artificial intelligence, for which the Allied armies are showing great interest, out of a desire to be competitive and able to fulfill their missions.

The fact that the military organization must continuously adapt to both new security requirements and evolution of the defended society is generally accepted, the success of the missions depending on the combat power in general and its component, the physical power, through the level of manning and equipping, in particular. Being the main promoter of the accession to the North Atlantic Treaty Organization (NATO), the Romanian Army benefited from the attention of the decisional political factors, which allocated the minimum necessary funds to fulfill this important step for our country. The process of transformation and modernization began long before the time of accession, but the technological progress and the interoperability requirements that make collective defense possible have revealed a broad range of needs.

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Against this background, the implementation of major procurement programs has become one of the main objectives of the strategic management, whose goal is to transform Romania from a consumer into a security provider, able to meet the needs of national and collective defense on NATO's Eastern flank (Ministry of National Defense, 2020, p. 71).

This article analyses the actual Romanian military logistics' needs and the challenges generated by the major procurement programs, to provide a preliminary assessment of the extent to which the actual procurement programs could answer to the broad spectrum of activities and needs of the Romanian Army. To accomplish this goal, the research followed some subsequent steps, intended to find answers to the following questions: 1) which are the actual needs of the Romanian military logistics? 2) what challenges do the main procurement programs of the Romanian Army generate for the military logistics?

A case study was conducted to achieve the proposed objective, based on the critical analysis of some relevant documents and of the content available on-line.

2. CONSIDERATIONS ON THE ACTUAL ROMANIAN MILITARY LOGISTICS' NEEDS AND PROCUREMENT PROGRAMMES

2.1 The range of the Romanian military logistics' needs

There is a wide range of Romanian military logistics' needs. Firstly, there is one part dictated by the combat troops needs. In this respect, a good starting point for this research is the analysis of logistics functional and related areas included in the last version of the logistics allied doctrine, because the Alliance framework is the one which should be considered by the military logistic planners of any Member State. In short, the logistics areas are presented in the following table:

Table 1. The military logistics' areas

Logistics functional areas	Logistics-related areas
Supply	Budget and Finance
Materiel life-cycle support	Military Engineering support to logistics (includes Environmental Protection/EP)
Equipment maintenance	Mortuary Affairs
Movement and transportation	Contractor support to operations/CSO
Services	Civil-military interaction
Medical (medical support, veterinary support)	Military Police

Source: NATO Standardization Office (2018), pp. 5-1 to 6-6

To start with, it is noteworthy that the broadest functional logistic area which has a direct influence on the military logistic sustainability is the one which refers to supply (NATO Standardization Office, 2018, pp. 5-1). From this perspective, the major items of equipment, which directly contribute to the availability of products and services should be included in or associated with the five classes of supply mentioned in Table 2.

Consequently, the items included in each class of supply could be used to determine the tangible requirements of a sustainable Romanian military logistics. Being dedicated to "supplies for which allowances are established by tables of organization and equipment" (NATO Standardization Office, 2018, pp. C-1), the second class of supply should be the one addressed by the major procurement programs.

Table 2. NATO classes of supply

Classes of supply	Description
Class I	Items consumed by personnel or animals (...). Examples: rations and forages.
Class II	Supplies for which allowances are established by tables of organization and equipment. Examples: clothing, weapons, mechanics' tools, spare parts, vehicles, etc.
Class III	Fuels and lubricants for all purposes (...). Examples: petroleum products such as gasoline, kerosene, diesel oil, fuel oil, lubricating oil and greases and solid fuels such as coal, coke and wood.
Class IV	Supplies for which initial issue allowances are not prescribed by approved issue tables. Examples: fortification and construction materials (...).
Class V	Ammunition, explosives and chemical agents of all types.

Source: NATO Standardization Office (2018), p. C-1

Although the examples provided by the logistics doctrine are too general, taking into account the items of equipment which are found in most tables of organization, items like the ones used to prepare food or to ensure decent life conditions for the military deployed in a field area, are part of this category. For instance, vehicles of any kind (including the ones specific to civil institutions), field kitchens, field bakeries, special containers (designed for showers, laundry, dish washing, storage, water purification, maintenance, toilets), material handling, recovery and replenishing items and modular expandable tents (with multiple purposes, like: command and control, dining halls, dormitories, work places, funeral activities) or systems created by their association, are types of equipment with a decisive role on the still actual battlefield, which also contribute to ensuring services or subsistence products from the other classes of supply (NATO Standardization Office, 2018, pp. C-1, 5-4). Additionally, these elements contribute to some other logistics functional areas, like medical support, veterinary support, or to related ones, like military engineering support to logistics, military police, civil-military cooperation (NATO Standardization Office, 2018, pp. 5-5 to 6-6). Generally speaking, all deployable items which contribute to mission accomplishment are of a high importance and should be part of the requirements' list, irrespective of the fact that they are used only in the military domain, or are common to this one and to the civil ones. Consequently, this impressive range of equipment needed by the military forces should represent a prior concern when establishing procurement programs.

Secondly, there are some logistic challenges brought by the membership in NATO and European Union (EU). From this perspective, the intangible part of the requirements list comes from operationalizing core directions mentioned in the official documents, like interoperability, which requests a lot of common effort, visibility and cooperation, to avoid logistic resource duplication and to enhance efficiency, both at national and organizational levels. Moreover, the new strategic views adopted this year by the two organizations are expected to produce some changes in the way logistic activities will be supported. For example, the analysis of the new NATO Strategic Concept adopted this year revealed the need to adapt to the current operational context and to enhance collective defense resilience. This adaptation should be regarded as a trigger and should also be mirrored in the procurement programs, which should take into consideration new needs, like the ones related to innovation, climate change, human security and gender perspective, which are identified with NATO's core tasks (North Atlantic Treaty Organization, 2022, p. 1). From this perspective, it is expected that military logistics be prepared to support all transformational directions, like: integrating disruptive technologies for own troops, while ensuring means to detect

and deny for the opponents', reducing dependencies in the military logistic supply chain, responding to food insufficiency and health emergencies, identifying ways to rapidly preposition essential stocks, while efficiently using energy resources and protecting the natural environment (North Atlantic Treaty Organization, 2022, pp. 1-13).

Although this document, through its strategic nature, does not specify detailed items of equipment which are expected to operationalize these trends, it mentions troops sustainability as a main desideratum (North Atlantic Treaty Organization, 2022, p. 6). Nevertheless, the new concept for collective defense highlights the intent to identify and mitigate "strategic vulnerabilities and dependencies" (North Atlantic Treaty Organization, 2022, p. 7). Taking into consideration the fact that the document also states the need to respect human rights, to reduce green-house gas emissions, to make a transition towards green technologies, and to enhance cooperation and promote peace (North Atlantic Treaty Organization, 2022, p. 11), aspects which coincide with the sustainable development goals (United Nations, 2015, pp. 14-28), it is expected that the aim of logistics sustainability be accomplished in the context of sustainable development, a superior form of economic development which takes into account not only the financial benefits of the economic activity, but also the care for people and the planet (Blewitt, 2018, p. 20). This translates into a broader vision of the Alliance, which is in line with the policy conducted so far by the EU, an economic organization which lately recognized the need to enhance its military pillar.

To create a framework for this new policy, the Council of the European Union adopted the Strategic Compass, a document that highlights the need to complement NATO's efforts regarding security and defense. In terms of military logistics, the expectations are in line with those depicted from the new NATO Strategic Concept, but in comparison with it, the EU approach brings more detailed directions which should be considered by the military logisticians, like reducing technological and industrial dependencies (Council of the European Union, 2022, p. 12). Moreover, sustainability, circular economy and autonomy are seen as ways to reduce pressure on "critical supply chains" and to avoid disruption in the "key trade routes", some negative effects of the Covid-19 pandemic (Council of the European Union, 2022, p. 23), the military organization being called to act in this respect, in cooperation with the civil ones, the accent being placed on dual-use capabilities and rapid deployment (Council of the European Union, 2022, p. 25).

In this context, logistic assets like the ones which support strategic transport, force protection and medical support are considered facilitators which need to be commonly identified and funded by the Member States, to avoid duplication and obtain efficient results (Council of the European Union, 2022, p. 25).

To enhance the comprehensive approach in missions and operations conducted by EU, and also to make possible the employment of another logistic related area, contractor support to operations (NATO Standardization Office, 2018, p. 64), the Strategic Compass also states the goal of creating a capacity to deploy "200 civilian experts within 30 days, making full use of the key equipment and logistical services offered by the Strategic Warehouse and the Mission Support Platform" (Council of the European Union, 2022, p. 27), without excluding some other efficient instruments. Of the two mentioned logistic instruments, the former, the Strategic Warehouse, is a solution to procure, deliver and manage the inventory allocated to Common Security and Defense Policy/CSDP civilian missions, providing a "streamlined, modern logistics", which encompasses "soft skin vehicles, personal protective equipment, medical kits, communication equipment and IT-hardware" (n.d., Equipping our civilian CSDP Missions: the strategic warehouse in Central Sweden ensures streamlined logistics, 2020). Additionally, the latter instrument contributes to economies of scale, facilitating rapid deployment, management and conduct of the same type of EU missions (Council of the European Union, 2016).

From the perspective of another logistics functional area dedicated to movement and transportation (NATO Standardization Office, 2018, p. 57), the Strategic Compass signals the "urgent need to substantially enhance the military mobility", cooperation with NATO, dual-use transport

infrastructure, digitalized, cyber resilient, cutting-edge and energy-efficient capabilities, and real life training exercises with troops on the ground (Council of the European Union, 2022, pp. 29, 31), which are expected to be very demanding for the military logistics. This goal highlights once again the importance of deployable field logistic capabilities, which should be included in the procurement programs, regardless of their military or civil nature.

Another direction established by the Strategic Compass refers to the stimulation of EU Members’ industrial base in general, to ensure supply chains resilience (Council of the European Union, 2022, pp. 35, 36). This aspect corroborated with the aim of implementing green technology and digitalization of armed forces on a greater scale (Council of the European Union, 2022, p. 38), determines new requirements for the military logistics, which needs to be supported by a state-of-the art defense industry, capable to respond to the actual security and development context.

Apart from setting new directions, the strategic document also reviews some existing shortfalls, which necessitate different logistic approaches, like “strategic airlift, space-based connectivity and communication assets, amphibious capabilities, medical assets, cyber defense capabilities and Intelligence, Surveillance and Reconnaissance capabilities and Remotely Piloted Aircraft Systems” (Council of the European Union, 2022, p. 44). Additionally, some already agreed capabilities are to be continued, like “Main Battle Tank, Soldier Systems, European Patrol Class surface ship, Anti Access Aerial Denial capacities and Countering Unmanned Aerial Systems, Defense in Space and Enhanced Military Mobility” (Council of the European Union, 2022, p. 45). It becomes obvious that, to fully implement all these programs, Member States economies need to develop strong defense industries.

In fact, it can be stated that the subject of defense industry was more powerfully brought into attention as a result of the dependencies revealed by the war in Ukraine and the Covid-19 pandemic. In this light, the Strategic Compass adopts a strong position, gaining a normative nature and establishing defense industry cooperation between Member States as a “norm” (Council of the European Union, 2022, p. 46), so that expected results become possible. With the same purpose, the accent is put on the joint development and procurement of military capabilities, making full use of the financial instruments provided by the Union, facilitating both private and public investments on this line and creating synergies between civil, defense and space industries (Council of the European Union, 2022, p. 47).

Taking into account the full range of logistic requirements provided so far, the following starting points should be taken into consideration by defense resources managers and logisticians when establishing an updated “list of requirements”, which should stand at the core of developing a more robust and participative defense industry at national and European level, able to respond to the emerging needs.

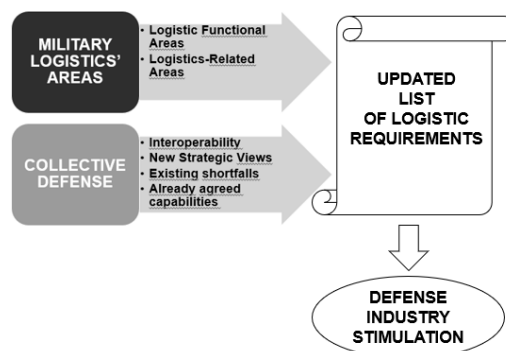


Figure 1. The starting points in creating an updated “list” of military logistics’ requirements

Source: author

The next part contains a study of the major procurement programs developed in the Romanian Army, with accent on the problems and dependencies faced by the military logistics and also on their completeness, with respect to the demands of the actual security and development context.

2.2 The military logistics challenges generated by the procurement programs of the Romanian Army

The implementation of new procurement programs proved to be a difficult process in the post-communist era, for several reasons, the most significant being the reduction of the national defense industry, amid the lack of orders from the main national beneficiary, the Ministry of National Defense, and the lack of predictability regarding the logistic needs and multi-annual funding programs that would have ensured the continuity of the effort. In this respect, an eloquent example is the program to equip the navy with corvettes. In this case, the period of time elapsed since the decision was adopted by the Supreme Council of National Defense, until the initiation by the Ministry of National Defense of the process of drafting a government decision lasted nine years (New Strategic Center, 2017, p. 7). Another program was dedicated to Piranha armored personnel carrier, which was similarly carried out, as a longer period of time was required for the logistical operationalization of the structures that received this combat vehicle, the main logistic problems being related to providing fourteen armoured vehicles specially equipped for maintenance (damaged vehicles towing) and medical support (medical evacuation) (New Strategic Center, 2017, p. 7), two important logistic functional areas.

Another issue that left its mark on the implementation of procurement programs was the poor inter-institutional cooperation, especially in terms of research and development. Related to this aspect, the non-existence of joint research and funding programs at the level of the Ministry of Economy and the Ministry of National Defense, to support the collective security effort, was signaled and resolved at the time of initiating the programs aimed at equipping aircraft F -35 and Leclerc AMX 56 and Leopard tanks (New Strategic Center, 2017, p. 7). This could be considered a good practice example, in the light of the new cooperative norms imposed by the European Union, which should be extended to cover the broad range of military logistics' needs.

Regarding the predictability and availability of the necessary funds, the acquisition in 2015 by the ground forces of sixty IVECO trucks, given that the total need for such equipment in the Romanian Army was ten thousand (New Strategic Center, 2017, p. 6), generated the logistic problems posed by fragmented acquisitions and procurement of different types of equipment, this aspect generating complications from maintenance perspective. Because only those who have not worked in the logistics of military transport structures, equipped with a multitude of different models within the same category of technical equipment, cannot imagine what effort is required in peacetime: monitoring of maintenance work, identifying the need for spare parts and repair services, establishing validity framework agreements and the quantities subject to contracting on the basis of the history of failures, not to mention the difficulty of performing these activities during exceptional conditions (mobilization, siege, war).

These identified lessons turned into lessons learned by logisticians, who sought to change the perspective of procurement in subsequent programs, with an emphasis on implementing the idea of integrated logistics support, which takes into account all the costs and technical requirements of a system, from the initiation of the program, until its decommissioning (Yolton, 2008, p. 3). Thus, the provision of maintenance has become the main criterion considered when contracting.

In the context of NATO requirements regarding the multi-annual allocation by Member States of at least 2% of GDP to the military sector and the directing of 20% of the defense budget to military equipment (Administrația Prezidențială, 2020, p. 3), the need to implement essential procurement programs to bring the Romanian Army to the established level of ambition began to be feasible, and, currently, a number of such initiatives are completed or in progress.

Among the equipment that is currently included in the priority procurement programs, with ongoing procurement contracts at the level of the General Directorate for Armaments, there can be mentioned: the Piranha V 8x8 armored personnel carrier, the HSAM Patriot long-range surface-to-air missile system, the HIMARS launcher system multiple long-range missiles and the F16 air force multirole aircraft (n.d., 2022).

The common benefits of these procurement programs are indisputable, being related to increasing the interoperability, mobility and operational capacity of the Romanian military structures, but most of the economic providers are from outside the country and the European continent, for instance, from the United States of America. This fact could raise security issues, due to the dependence on a long supply chain, with many intermediaries, each with its own security interests, problem which is expected to be solved with the implementation of the Strategic Compass.

The fact that the Romanian Army can face procurement problems during exceptional situations is supported by the example of the Piranha V carrier, in which two out of three subcontractors are of Romanian origin, and the third is from Israel, (n.d., 2022) subcontracting certain components to local suppliers (motors, metal or plastic components) (Botea, 2019). However, this would not necessarily be a concern if the delivery schedules of the imported equipment and internally assembled components were accomplished in peacetime, question marks occurring due to long delays (over a year), for which the Romanian state charged penalties amounting to 8.5 million euro for the lot expected in 2019 (Botea, 2019). Nevertheless, the amounts charged as penalties would have been useless in the event of a security issue.

Analyzing the available data on these procurement programs, the presence of the phrase "initial logistical support" (n.d., Cum arată primele rachete Patriot care vor intra mâine oficial în dotarea Armatei României, 2020) was identified in the part related to the service packages that are purchased simultaneously with the mentioned products. For example, in the case of the Patriot system, art. 1 para. (1) lit. a) of *Law no. 222/2017 for the achievement of the "Ground-based air defense capability" related to the essential procurement program "Ground-to-air missile system (HSAM)"* requests the approval of the Romanian Parliament for the award by the Government of the contract for the acquisition of seven Patriot systems, which consists of providing "major equipment, means of transport, materials, parts, maintenance equipment, ammunition required, the initial logistics support package and training service, cryptographic and special equipment" (n.d, 2017). The law does not define the content of the initial logistic support package, and this phrase is not defined in the normative acts with military specificity in force in the logistic domain, generating, by the presence of the word "initial", questions regarding the way of providing integrated logistic support during the entire life of equipment and the capacities available for this purpose at national level.

Hence, the great challenges for the Romanian military logistics:

- 1) defining/clarifying the concept of "initial logistics support" and the difference between it and that of integrated logistics support;
- 2) ensuring the maintenance needs that appear after the exhaustion of the content of the initial logistic support package;
- 3) ensuring the continuous availability and training of the human resources involved in the operation and maintenance of the equipment.

Regarding the HIMARS system, it is noteworthy that its acquisition is regulated in a more generic way, the word "initial" being excluded and the legislator referring to "logistical support" that must accompany the purchased equipment (n.d., Law no. 46 for the realization of the "Indirect fire support capability" related to the "Multiple missile launcher system" procurement program, 2018). Nevertheless, the logistical challenges are the same, depending on how the post-acquisition operation and maintenance activities will be carried out.

With regard to the F16 aircraft procurement program, a challenging aspect in terms of logistics, in general, and maintenance, in particular, is that twelve were purchased "from the surplus" of the Portuguese Republic (n.d., Law no. 240 for the achievement of the "Air Operational Capability included in Phase I of the Initial Transition Stage of the Concept of Gradual Achievement of Air Defense Capability" within the "Air Force Multirole Airplane" Program, 2013), or at "second-hand" quality. From a logistical point of view, procuring equipment that has gone through a part of the life cycle and that is close to consuming the technical resource is a challenge that will give logisticians headaches, especially due to the increased frequency of expected failures. This outcome appears through the hidden risks related to the exploitation by the first beneficiaries and the shorter period of time remaining until the moment of decommissioning, but also through the appearance, in a shorter time, of the need to make new acquisitions. Actually, ever since the beginning of the procurement program, the need to modernize them has been felt, an activity that involves maintaining equipment in service, engaging specialized labor and allocating energy resources and additional materials from the Romanian state.

In general, the decommissioning of equipment of such magnitude will be a challenge in itself for Romanian military logisticians, who will have to access clear information on the date when they were initially put into operation and the depleted technical resources. Moreover, the scrapping and capitalization activities that occur after decommissioning will also be demanding, requiring the involvement of staff specialized in such large-scale activities, to the detriment of other priorities.

In addition to the mentioned procurement programs, with ongoing contracts, according to the data available on the website of the General Directorate for Armaments, at the level of this structure there are other programs in the preparation stage, these aiming at procuring:

- command and control systems with ISTAR (intelligence, surveillance, target acquisition and reconnaissance) integrated capabilities, which in the first phase will contain integrated communication systems for six battalion command points and three brigade command points, covering the tactical-operational level of the ground forces;
- short-range and very short-range air defense systems/SHORAD-VSHORAD integrated low-range, low-impact missile-to-air missile system, in order to improve air defense capabilities;
- revitalization and modernization of IAR 99 aircraft by the Romanian Army, in order to ensure training and transition to F16 piloting;
- seven tactical-operational unmanned aerial systems (UAS), class II, to ensure real-time information support;
- ground-to-air systems with close-range/very short range, portable, for direct anti-aircraft defense of forces, means and infrastructure elements, against aerial platforms that attack from low and very low/ grazing heights, in conditions of direct visibility, day and night.

Moreover, at the Ministry of National Defense level, it is intended to renew the helicopter fleet, also by involving the national defense industry in Braşov, taking steps to build the second squadron of F16 aircraft, implementing Parliament's approval for the acquisition of multifunctional platforms wheeled transport, in which case the supplier will be obliged to produce the equipment within the national defense industry, according to the offset policy (Ministry of National Defense, 2020, p. 76). Furthermore, as depicted from the website of the same structure, research programs are in progress, to develop additional systems which enhance the fighting capacity.

It is expected that the future procurement of such essential items of equipment will generate the same challenges for the military logistics as those within the programs already in progress, the needs of maintenance throughout the life cycle and those of training on operation and maintenance being the most important. A viable solution would be to sign procurement contracts "only if the offset contract with the manufacturer has been concluded" (New Strategic Center, 2017, p. 26), which would ensure continuity in solving maintenance problems. Additionally, the storage

requirements, which necessitate modernization and adaptation of existing spaces, should be taken into consideration.

What is more, is the fact that there is only one procurement program dedicated to logistic support in itself (movement and transportation area), which refers to 2,902 wheeled transportation platforms in different configurations, the supplier being obliged to manufacture 942 of them in the Romanian defense industry (Ministry of National Defense, 2020, p. 76). Thus, important steps were made to gradually involve the national defense industry in manufacturing the products needed by the military, but there is still a long way to the desired end state in this industrial area, established in the European Union Strategic Compass (powerful defense industry, capable to support joint development and procurement of military capabilities).

Nevertheless, comparing the wide range of military logistics’ requirements provided in the previous part of the article, with the existing procurement programs, it can be noticed that the current efforts are being centered more on systems which support land, sea and aerial fighting and artillery tasks, and in a smaller extent on the logistic systems, which could represent essential enablers in a crisis situation, if taken into consideration.

At this point, the elements inside each of the two main starting points, provided in Figure 1, can be developed on the base of the new trends for security and sustainable development context presented in this part of the article, so that logisticians have access to a “check-list” and use it whenever initiating new requests for procurement. Consequently, the following preliminary “check-list” could be of real help in this respect:

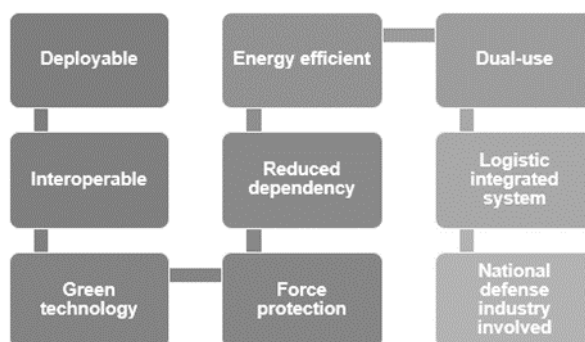


Figure 2. The preliminary “check-list” for military logistics’ requirements

Source: author

Of course, the nine “check-points” included in the proposed list could not be applicable in any case associated with military logistic needs, but its existence and its increasing frequent usage could solve the demands of the actual complicated context, which calls for tackling a broad range of security problems with as little as possible resources. Moreover, this format should not be applied in a rigid manner. In this respect, the order in which logistic needs and their characteristics are taken into consideration could vary, as “the complexity of logistic support activities request a flexible planning” (Minculete, 2015, p. 81), both in peacetime and crises situations.

3. CONCLUSIONS

The military logistics will face a lot of requirements, but the actual procurement programs do not cover the entire range of logistic needs. While the majority of these are very well known, there are instead some other challenges generated by the new strategic visions adopted by NATO and EU, which call for integrative approach to solve emergent problems like pandemics, climate change, hybrid war, civil population assistance, etc. In this respect, logisticians from Member States,

including the Romanian ones, will have to adapt the list of requirements, taking into account the shortfalls, the problems identified so far and the new trends. Furthermore, they will have to cooperate and design a complete list of logistic capabilities in support of the new missions, having the sustainability criterion as a starting point, to take into consideration the benefits on a prolonged period of time, the impact of the military activities and field living conditions on the military organization's efficiency, employees, civil counterparts, and environment.

Additionally, logistic burden sharing will be another challenge for this domain, which is expected to generate economies of scale and a supple collective logistics, essential in the actual security context which became more and more demanding.

In the not-too-distant future, the emergence of artificial intelligence is expected to radically change the way military action and associated logistic support will occur. In this context, but also in the one represented by the mentioned procurement programs, the logistics' connection to the operational rhythm will represent a key factor, which will make possible the realization of real time logistic support. From this perspective, digitalization, complemented by redesigned training and educational programs for logisticians, should allow the transition towards these new trends.

Regarding the Romanian military procurement programs, the logistic effort should be oriented towards reducing the gap between needs and possibilities of the national defense industry to sustain them, but not in the sense of cutting the requirements, but in terms of developing the manufacturing possibilities. Otherwise, the new trends will deepen our country's dependency on the external support and will not represent an opportunity to create value for the Romanian society, in general, and for the Romanian Army, in particular, the final effect being a continuous race against time and the latest developments.

To avoid such effects, more attention should be given to research and development, civil-military cooperation (especially in attracting academic and research institutions, private investors and financial support) and to the efficient usage of the instruments developed by NATO and EU, to enhance the defense industry and to transform our country from a security consumer, to a security provider.

All things considered, it can be concluded that the actual economic, pandemic, environmental and security context, apart from having a negative impact, could also bring advantages for the national defense industry, as the interest in this field is higher than ever and the decision-making factors more aware of the current risks associated with dependency on long military and civil supply chains.

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