

MANAGEMENT OF LOGISTICS SUPPORT STRUCTURES – DEVELOPMENT AND DESIDERATA

Nicolae NICOARĂ, Gabriela-Florina NICOARĂ

“Carol I” National Defence University, Bucharest, Romania
2nicoara@gmail.com, gabriela.nicoara.cj@gmail.com

Abstract: *Every single day, the personnel from the logistics work hard in order to provide continuously the needed support for the recipients. The military field is changing and developing. The combat experience of the Romanian soldiers and the common exercises carried out with the strategic partners increase the military field capacities but also its expectations. In this context, we believe that logistics should move forward in order to update and upgrade at the tactical level. It has to enhance its ability to anticipate, to improve the speed of response to requests, and to reduce the improvisation in making decisions. In this article, we will write about a few means of increasing management efficiency through structural changes. Moreover, we will take into consideration the need to upgrade the management systems and we will highlight the benefits of using the tools of management in logistics.*

Keywords: logistics, management, military field, efficiency, upgrade

1. Introduction

Tactical logistical structures are the military organizations on which all doctrine from the logistics field, property regulations and economic legislation have the greatest impact. The effect is grand because of the fact that the nominated structures represent the executive level where the whole design is translated into practical actions. The functional areas of the logistical support are more complex than ever, whether we refer to supplies, combat stocks, lifecycle equipment management, movement and transportation, infrastructure, HNS or RSOM [1]. As a result, young logistics officers are asked to: *„assume you will have more responsibility dumped on you than you ever imagined when you were sitting in your basic course. You're expected to figure it out, whatever «it» may be. I guarantee your operational commander is never going*

to think of everything, so you have to be able to anticipate--every day, vehicles use fuel; people eat and drink water; they get hurt; weather and terrain conditions change. Anticipation--that is the key!” [2]. In circumstances where the Romanian Army started the process of upgrading, equipping and modernizing in order to become interoperable with other NATO countries, as well as updating the entire military thinking, is the military logistics still able to support all the needs required by the combat forces and combat support forces? We believe that the logistical modernization of the tactical structures has not stagnated either, but at this level major upgrades are still required in order to ensure that the speed of response and the managerial foresight capacity will have the highest standards.

2. Reflections on the improvement of the organizational logistics system

Highly complex system characterized by fundamental implications in the very existence of the military system as a whole, the Integrated Logistics System of the Romanian Army provides the basic organizational framework for tactical logistical structures, independent of integrated in combat forces or in combat support forces to operate in optimal conditions. However, the evaluation of the performance of a military logistic subsystem (tactical unit or sub-unit) cannot be assessed in terms of economic or financial results, because it does not have an economic operators' equivalent property purpose and, sometimes, its assessment based on the achievement of the objectives may be misleading in the long term. Even if the management team is not performing well, in the short term a very good execution structure can lead to successful missions. Thus, in terms of efficiency, we believe that in its measurement, we need to take into account aspects that are additional to the fulfilled objectives, such as: the degree of employment with personnel on management grounds, the level of force protection, shortcomings in the administrative and classified document circuit, the health and the medical preventive measures, working conditions at all organizational levels, the details of good heritage management, the state of essential and non-essential techniques, the satisfaction of work, the efficiency of the organizational communication extent to which transmitted orders are monitored and executed, the integration of newcomers, the cohesion of unit. Moreover, from an organizational system point of view, we consider that a few of fundamental changes are needed in order to generate efficiency among tactical-level logistical organizations. The boldest idea we have looked at is presented in what follows.

Overall, the logistical support / support structures associated with big units

(brigades or divisions) are located near the headquarters. However, the big unit has some of the subordinated units located far away from the main headquarters.

On the one hand, this state of affairs generates positive effects related to the socio-culture nature of the Romanian nation: the military personnel relocated may benefit the opportunity to live in the environment in which they were born or educated, together with their relatives or parents. On the other hand, an arrangement like this generates negative effects. According to the design of the logistics support, and to the military objectives and missions, the logistics unit is designed to provide logistical support to all the units subordinated to its headquarters. Moreover, the support should cover all areas of logistical support.

From what we have observed, the arrangement of the logistics alongside the headquarters of the big unit and far away from the tactical-level structures equivalent to the logistics organization generates confusions in the perception of most soldiers, including commanders, as follows:

- the perception that the logistical support / support structure is created to provide logistical support only to the upper echelon headquarters;

- the perception that logistical support for military structures at the same hierarchical level, subordinated to the same command, is inefficient, creating the need for decentralization and, thereby, loading military combat and support structures with additional administrative and logistical tasks. Reanalyzing the design of the tactical structures (brigades, regiments, logistical bases) considering compact, short-distance locations with extended facilities nearby, helps the entire system with improving the military experience and with simplifying the daily activities. The entire process represents a precondition for:

- creating the optimal conditions to provide full, proportionate, immediate and timely logistical support to all the big unit parts;

- making a common training program involving the logistical support units (we know that, at this time, this kind of program is difficult to be implemented);
- helping the process of gaining theoretical information about: the military organizations, the way each unit acts, details about the technique and the endowment for which important logistical flows are made, precautionary measures and avoidance of the fratricide, logistical support features;
- the deep, mutual understanding of the way in which the combat structures act in relation with the logistical support structures and vice versa;
- strengthening the cohesion of structures and awareness of the importance of each weapon and specialty in the fight;
- taking into consideration the possibility of carrying out daily activities in modular, mobile facilities that can be reused in case of a conflict;
- know how to use all the established procedures;
- reducing the importance of the representation activities, collaboration and interaction activities with local authorities;
- performing, on a centralized basis, all the administrative tasks for the whole large establishment;
- establishing a single and functional information system within the great unit;
- easy learning and enhancing the ability to implement and realize the concept, missions and vision of the top line;
- increasing the work and the possibility of implementing various goals regarding development, infrastructure improvement, training and quality of life;
- a thorough understanding of the common training environment by all joint military organizations, which make it easier to understand the operational environment in the political, military, economic, social, information, infrastructure, space and time context (PMESII-PT);
- exponential increase of interoperability of tactical-level structures and making the

right conditions for modernization, “on-line”, of the army through the networking and continuous joint operations, under the same field and temporal conditions;

- increase the interoperability with other NATO structures by using the possibility of practicing common procedures.

One of the main questions is whether this change involves too many resources or not. We believe that the result of this question should be highlighted after completing an objective analysis of the future professionalization and the effectiveness of the army, as well as the desired social and professional profile of the Romanian military.

3. Consideration on the development of the management systems

The most important component of the organizational process, the management system should not be seen just from a financial and accounting point of view. If we are to address the management system, which is a relevant factor in achieving the objectives of the organization, we believe that we need to raise the issue of the human resources management system, the information, training, objectives and mission management, the financial-accounting, the command-control-communication management system, the objective security system and the communication system management. All these elements can be subjects to more research by themselves and are in broad areas whose detail is not the subject of this approach. On the one hand, a very good management system with interactions between the specific areas of the units, with connections between the informational components provides masters with the necessary tool for adopting the best logistical decisions. On the other hand, the development of such an integrated management system which takes elements from one field to another is a system of motivating military personnel and simplifying planning, organization, management and control work. As an

example, at this time, for the purpose of drawing up a distribution document in the construction and accommodation field, the logistics technician must refer to a number of documents and computer application:

- first of all, it is necessary to consult the inspection report of the previous year in order to determine whether the work has been proposed or not for repairing on its own system;
- secondly, it is necessary to consult the accounts in order to identify the products required;
- moreover, the office worker should draw up the distribution-consumption document in a purely manual manner, although using the calculation technique without any automated information at his/her disposal. The implications of the above operations are that materials transferred to the contractors of work can easily be subject to several errors. One of the most important errors is represented by the possibility of allocating stocks to other destinations. Thus, the stocks will be difficult to find in the liquidation file which underpins the reduction in the accounts of the materials used when the final reception of the buildings is carried out.

The only solution is a performing, integrated management system that enables logistics to take time for activities that really lead to performance. The above example implies the need to set up a specific management system for the construction and the accommodation sector, covering the entire management infrastructure, which is capable of generating documents automatically like: technical files, periodical inspection papers, primary financial accounting documents, time-keeping and management element of the personnel, reception documents, and others. Linked to the human resources management system, which can generate estimates of whether or not the work proposed by its own resources can be carried out within a year, with the system of financial and accounting management (for

obviously multiple elements), with the supply, support and re-supply system (which does not exist), thus should generate automatic supplies of building materials, inventory objects, working and protective equipment. Moreover, if this system were connected with the physical security management system of barracks, this could result in a highly efficient system of command and management of all the areas concerned.

4. Consideration of the Implementation, Computerization and Operation of the Tools of Management

The methods and the tools of management are crucial to the proper and effective management of organisations. Just as a small, arable land can be planted and become useful as an agricultural area with simple hand tools and for a large field, there is a need for academic knowledge to be developed within formal education, with resources from different areas and a large variety of methods, techniques, tools and machines. In the same way, a tactical organization (our opinion is that in the logistics field, from the platoon level to the top) requires a range of managerial tools and techniques to achieve all the established goals of the organization. „*Budgeting is one of the planning techniques used by many managers, regardless of the organizational level. It is an important managerial activity because it forces to bind the financial discipline and its structure within the organization*”[3]. It does not generate positive feeling because of the sequences, operations and the laborious need for coordination. In spite of this, the process of planning of the budget cannot be excluded from the instruments that a logistics commander uses. For a tactical-level logistical structure designed to provide the logistical support to other military combat forces or combat support forces led by a single echelon (logistic base, regiment, brigade or infantry division) the budget implementation by using an information

system integrated into the above mentioned system, connected with the supported units, is a necessity nowadays. The contemporary attempt to achieve the budget in an empirical manner but with the use of the calculation technique is always doomed to fail. Of course, the lack of involvement of the beneficiary units can have disastrous consequences, mainly when the war budget is drawn up. In this context, a better coordination of the logistics modules through integrated software represents a real solution. The visibility of the entered date, their automatic correlation with the established objectives or with the imposed tasks, the highlight of certain omissions, under assessments or overestimates would make budget an easy tool to implement and pursue.

The Gantt chart is another tool that can be used in order to improve the logistics management systems.

In its simplicity, the Gantt chart represents the performance over time of less complex tasks, and can easily be used in many of the logistics activities at the company and even at the battalion level. The display of some types of project statistics, as well as available maps and possibly, if there are the necessary sensors on the means of transportation, the planned and real-time routes are essential logistical elements in this modern field where the military system operates.

The load chart is a different adjustment of the Gantt chart. It is a tool that can be used from a different perspective and for different aspects of the manager's problems.

We believe that using the appropriate software, the load chart can be designed to automatically retrieve data and information, generate itself, along with mathematical reports of the capabilities used but also graphical reports easy to view, requiring only additional information from managers and final validation.

The Pert Network analysis is a much stronger and more complex tool and can be

used in order to conduct projects, to fulfill objectives, to accomplish missions and even to follow the planned military operations.

In order to use the Pert Network in a proper manner, the leading team has to identify the key elements involved in the entire process, to monitor the performance of the activities according to the results of the chart and to continuously update the chart based on the successful completion of all intermediate tasks or missions.

The aim of this article is not to give examples but to suggest that you should imagine the development of such a Pert Network throughout the process of deploying a unit using the necessary software that is part of the military information system.

The problem of deploying unit would no longer be as stringent and flawed as is the case with the design and execution of purely manual plans, and the possibility of real-time tracking by the mobilization management group and the upper parts, this would be a revolutionary achievement. We believe that there are many activities that should be analyzed by using the Pert Network:

- the operational stages of the units in order to move to the state of war;
- the stages of preparation of the detachments which should be ready to be deployed in different conflict areas;
- different elements of the military conflicts.

Using the Pert Network in analyzing the above mentioned activities would significantly reduce the necessary time for making a decision. Moreover, it would help the troops to avoid the surprise and any errors caused by the human factor. Moreover, „when preliminary estimates indicate that certain activities are at risk of being delayed and a balancing or redeploying of efforts, a redirection of labor and money, or any other type of priority are required to restore the planned project date.”[4], not only is the Pert Network very

useful, but it may not be possible to detect a potential hazard without it.

5. Conclusions

We are talking more and more about a modern army and the fact that NATO has given it a lot of trust confirms both: the army value and the performance of its personnel. However, logistics representation within the alliance is small, both in terms of courses, exercises and partnership, and missions in areas of operations. Moreover, in Afghanistan, the Romanian Army has a National Element Support and the logistics elements from the protection force battalion. A representative number of the functional logistics domains are managed and provided by the international partner.

Considering that the Romanian military system has several networks with different classification levels, the development of a

high-performance logistics system, integrating the management elements and the managerial information described above, would generate exponential growth within the logistics management.

The managerial efficiency gains would be great due to the automation of accounting documents and the papers within logistics by the usage in a proper manner of the common databases within the entire army. Moreover, this approach removes the daily unimportant activities from the commander's schedule and helps him to concentrate on the really important aspects. Also, the managerial tools used within a system characterised by a high access to a large spectrum of data at all levels (tactical, operational and strategic) significantly improve the managerial efficiency.

References

- [1] According to *Doctrina logisticii întrunita Armatei României*, București, 2018.
- [2] „*Backbone of deterrence: An interview with retired Lt.gen. Ben Hodges*”, https://www.army.mil/article/231655/backbone_of_deterrence_an_interview_with_retired_lt_gen_ben_hodges, accessed on 28 January 2020.
- [3] Stephen P. Robbins, Mary Coulter, „*Management*” thirteenth edition, p. 589, Pearson, 2016.
- [4] H. L. Oppenheimer, C.H. Greene, „*Mobilization and PERT*”, Jr. Marine Corps Gazette (pre-1994); p. 39, Quantico Vol. 52, Issue 6, (Jun 1968).