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CONCEPTUAL ASPECTS REGARDING THE EFFICIENCY OF LOGISTICAL SUPPORT IN PEACETIME

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Abstract: *Streamlining the logistical support of the military units at peace is a decisive desideratum in carrying out the planned military activities independent or joint, as well as their missions and is achieved through methods and procedures, which harmonize doctrinally and structurally with the general effort of the Romanian Army to participate, within NATO, to the joint effort to achieve regional and global security.*

Keywords: eficentization, logistical support, procedure, methods

1. Introduction

The process of logistical support of a military unit in peacetime is efficient when its results able to contribute to the realization of the stocks of material goods for the consumptions generated by the specific activities planned by the Plan with the main activities, the realization of the reserves of material goods for mobilization, the establishment of the combat stocks for crisis situations and war, as well as ensuring the quality logistical support and sufficient necessary for the training and training process through military exercises of the fighting forces.

We appreciate that streamlining the logistical support process involves searching, adopting and implementing methods, techniques and procedures that result in ensuring material resources in as little time as possible and with the least possible financial and human resources.

The path represents a "direction taken by a development, by an action, by a movement; method, means, manner, process" [1] and modality is a "process, means, method used to achieve an end; manner" [2].

The paths and ways of streamlining the logistical support of the military units in peacetime involve the search, adaptation and use of methods, techniques and procedures that have as final purpose and result the making available to the decision makers all the material resources and services intended for carrying out the planned activities and the achievement of the objectives set by the basic mission of each military entity regardless of its hierarchical level.

The method represents a "way of researching, knowing and transforming the objective reality; process or set of processes used to achieve a purpose; methodology; way of proceeding" [3] based on the use of "tools and production practices, developed throughout history, allowing mankind to act on the surrounding nature in order to obtain material goods"[4] hereinafter referred to as technical/techniques, and these can be used in turn in procedures that represent a "series of formalities to be executed in a process" [5].

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We consider that in order to make it possible to offer these material goods and services to military structures by reducing the expenses for their insurance, it is imperative to use these methods, techniques and procedures of efficiency, as well as the teamwork of specialists in the logistics field, both within the logistics system of the unit and with logisticians from all management structures, logistic planning and execution from the upper echelons, which constitutes the logistical system of the military units in peacetime. For this purpose, the compartments of the logistics structures act in close cooperation in order to streamline the results in the field of material resources management.

2. Procedures for the efficiency of logistical support

From the point of view of providing material goods, reduced to their simplest form, we consider that there are two procedures of efficiency, which can be committed to the execution of supply and replenishment / replenishment with material goods that constitute reserves for current conunities, reserves for mobilization, combat stocks and stocks necessary for the fighting forces for training and training in peacetime.

The first of the procedures concerns the entire responsibility of the military unit requesting logistical support. In this respect, it is known that when a military unit requests a type of support, it generates a request (request). Further, the military logistics system provides the resources from the stocks located on the logistic support units and subunits or from the sources at their disposal, in response to the request. This procedure is known as on-demand delivery or more simply, request.

The second procedure results from the reaction of the military logistical system of the upper echelon, which provides the resources without further action from the military unit that receives the logistical support. In this case, the resources are distributed to the logistical support structures, from where they are automatically allocated to the supported military units, depending on the planned programme and certain calculation formulas. This procedure is known as forced distribution or sending. The concept of forced distribution uses calculation formulas for anticipating the needs of logistical support or, where appropriate, distributing resources where and when they are most likely to be needed.

While it is associated with support, the concept of distribution can be applied to most logistical support activities and functions. In general, in such a system, materials "... are shipped/"pushed", through the push/push system, as close as possible to the consumer; in order to avoid the creation of large stockpiles of materials, perfect coordination between planners is needed, including the actual use of it technology [6].

The forced distribution procedure takes over some of the attributes of the commander of the supported structure, in the design of the needs and requests for logistical support, and this type of procedure ensures constant support, depending on the purpose pursued. On the other hand, because the needs based on anticipation and planning are taken into account, the danger arises that the units supported by this procedure will receive in excess certain benchmarks while others may be missing. The concept of forced distribution requires a correct estimation of the pace of military activities in peacetime and its correspondence with the pace of consumption. We appreciate that one of the disadvantages induced in the logistical support by the forced distribution system is that, as a rule, it has too little flexibility to be able to respond effectively to the pace and dynamics of the military activities planned through the Plan with the main activities of the military units in peacetime.

Through the application procedure, the logistical support unit directly controls the replenishment orders for the supported unit and as well as the requests for maintenance

and other support services. In this way, the supported unit assumes responsibility for anticipating and preparing applications, as well as the risk that all applications will be prepared and submitted in a timely manner, so that the requested materials reach where and when needed. We believe that the advantage induced by this procedure is evidenced by the fact that military units in peacetime receive only the logistical support requested. This allows supported structures an increased level of mobility by transporting a minimum quantity of support materials or equipment.

The benefits of the above-mentioned procedure lie in increasing the efficiency of the logistics system by reducing the overall amount of resources required. the way approached can be very effective, but its effectiveness depends on the ability of the military logistics system to react to all the requests received at an ever faster pace from the fighting forces that are training in peacetime. The success of the "on-demand" mode can be determined by the increase in the quality of communications and information management.

The two efficiency procedures can only be ensured by the method of computerization of the logistics system by developing and implementing a package of high-performance software combined in a logistics information system hereinafter referred to as SIL. The Logistics Information System (SIL) is intended for "... functional modeling of the integrated logistics system of the Romanian Army"; SIL is designed to be part of the Military Action Support Information System/SISAM), a program that will ensure the integrated management of all defense resources in times of peace, crisis and war, in support of military actions and activities.

3. Method of informatization of the logistics system

The method of informatization of the logistical system can be put into practice by computer technology, respectively the it network that is the basis for the execution of the logistical support of the military units in peacetime and ensures the collection and transmission of data and information from the existing sources, through the procedures of identifying the relevant data, their analysis, interpretation and distribution to the beneficiary military units. The IT network of the logistic support chain must ensure "the planning, organization, coordination and execution of logistics activities and operations at four levels: transactional, control, analysis and strategy" [7].

The information network of the logistical support must ensure "the development of the three important types of macro-processes managed by the supply chain (Supply Chain Management/ SCM), as follows: the management of the relations with the military units in the system, the management of the internal supply-delivery chain and the management of the relations with the suppliers" [8].

In recent years, the market of logistics software solutions has been marked by the emergence of integrative solutions for the management of the logistic support of military units in peacetime and of specialized solutions on macro-processes in the supply chain of material goods.

Unlike the traditional logistics vision, which focused primarily on the internal integration of logistical functions at the level of military units, the new approaches in the field, based on the concept of a chain of material goods supply, are focused on external integration, on the harmonization of the strategy and activities of the military unit with those of the upper echelon, or with the suppliers of material goods, or with other military units by means of an integrated computer network.

The information network of the logistical support of the military units in peacetime ensures the transformation of some manual information systems into information systems, by substituting the means of work with modern equipment, reducing the working times, eliminating errors, processing a large volume of data and

efficient distribution of material information.

According to some specialists, the network of logistical support of military units in peacetime must ensure "the development of computer applications such as: professional accounting applications; human resources management applications; integrated management applications (Enterprise Resource Planning/ERP type; customer relationship management, Customer Relations Management/CRM type; integrated information systems for SCM management; information systems for fleet fleet management system/CFNS type; geographic information systems, geographic information systems/GIS type); other specific applications, or personal interest" [9].

From the multitude of components of the computer applications we consider that the SCM application represents an information program that can be applied in carrying out the logistical support process of the military units in peacetime and must ensure:

- planning the logistical support activities, by establishing a set of metrics for monitoring the supply chain with material goods;
- management of supply sources, by establishing the suppliers of goods and services necessary for the process of providing material goods, as well as aspects related to prices, delivery and payment processes, metrics, etc.;
- product management by planning the activities necessary for testing, packaging and preparation for distribution to the combat forces;
- distribution management by receiving requests from units, combating subunits, developing a network of warehouses, choosing the mode of transport and the delivery-receipt system, receiving the requested material goods.

We would like to highlight that most SCM applications are based on information provided by enterprise resource planning (Enterprise Ressource Planning/ERP) software. This software represents a viable solution for centralizing all available information, and "customer relationship management (CRM) benefits from the existence of a single source of information". [10]

In the military environment, the connection of the logistic information system to the information network of the supply-delivery chain can be ensured through another category of technique that is the basis for the implementation of this package of software, namely the RTP / STAR network, which ensures the necessary speed and the quality required for the transfer of computer data.

At the moment, the national military communications network consists of:

- the permanent transmission network (RTP) provides the basic (stationary) infrastructure for multichannel communications;
- the Campaign Support Communications Network (RCSC) provides the (mobile) infrastructure for multichannel communications (realized within RTP);
- the Radio network with Integrated Services (RRSI) provides the basic infrastructure for monochannel communications;
- the Encrypted Videoteleconferencing System (VTC) provides encrypted videoteleconferencing services;
- the satellite communication system (SCS) provides the communication support in locations that are difficult to reach, isolated or remote;
- the unusable communication and information system (SCID) provides services for deployable forces in theatres of operations, as well as their connection to the NATO General Communications System (NGCS);
- tetra dimetra mobile communication systems provide mobile communications, for the central structures of the Ministry of National Defense and SMAp, the categories of army forces and the operational and weapon headquarters, as well as the cooperation with the other institutions within the defense, public order and national security system (SAOPSN)

through the use of the tetra common platform.

4. Conclusions

For the future, in order to fully interconnect with the computer network the logistical support of the military units at peace, we consider that the RTP/STAR network must be able to respond to the entire spectrum of environments and operational scenarios of the present and the future, some of its equipment being able to be integrated into the hierarchical technical systems of which they are part or of the technical systems of the echelons they support logistically (brigade, division), to be interoperable with similar systems in NATO member armies, to have optimal interfacing with the National Military Communications Network (NRMS) and to be able to use, if necessary, the facilities of the national telecommunications system. Last but not least, this network must provide communications support for Romanian troops participating in stability and support operations, outside the country's borders.

References List

[1] - [5] The Explanatory Dictionary of the Romanian Language (second edition revised and added), Univers Enciclopedic Gold Publishing House, Bucharest, 2016, p. 102 p.311, p. 317, p. 501, p. 625.

[6] The Regulation of Joint Operations Logistics, Bucharest, 2008, p. 6.

[7] Logistics functions, www.scritube.com/.../FUNCTIILE-LOGISTICII44625.php, accessed on 15.05.2022.

[8] Logistical information system: components and macro-processes, www.edumark.ase.ro/RePEc/pdf/cb2.pdf, accessed on 20.02.2022.

[9] www.cig.ase.ro/prof/.../CURSUL-14-PROGRAME%20DE%20APLICATII.ppt, accessed on 18.05.2022.

[10] The ABCs of Supply Chain Management (SCM), www.computerworld.ro/?page=node&id..., accessed on 25.05.2022.