

LOGISTIC SUPPORT PLANNING AT THE MECHANIZED BRIGADE LEVEL

Miroslav CEMPIREK*

Abstract: *This article contains a procedure for planning logistic support of Army of Czech Republic (ACR). It is focused on the planning and decision-making process for a chief of logistic of a mechanized brigade. The decision-making procedures are based on the army regulations and practical experience of the army logistics.*

Keywords: planning logistic, organizational structure, decision making process.

JEL Classification: M₁₀, L₂₃.

1. Introduction

The logistic formation is directly ordered by the commander of the mechanized brigade or by the chief of staff. These officers issue orders and take measures to fulfill the defined objectives. They are responsible for the effective use of available resources, and for the planning, organizing, and coordinating of operations undertaken by subordinate formations and units. This must be reflected in the organization of command and control, in the organizational structure of the headquarters and the staff, and in the functional structure of departments and groups, in their tasks, authorizations, and mutual relationships.

The chief of logistics and his department analyze logistic situations, plan logistic support, prepare proposals and data for the commander and the chief of staff, develop reports for combat orders and preliminary combat instructions, and coordinate activities with other departments. The chief of logistics proposes the employment of units and formations of logistic support and logistic support areas, supply routes and axes of evacuation.

The command of logistics and the control of logistic support at the mechanized brigade level are influenced by the following:

* University Obrany, Brno, Czech Republic, miroslav.cempirek@unob.cz

- work methods and methodology of the mechanized brigade commander;
- technical qualities of the logistics information system;
- organizational structures of the executive elements of logistics;
- readiness levels of the logistic support control bodies.

Effective logistics command requires the following:

- ability to receive information;
- ability to understand the process of information flow;
- ability to analyze;
- ability to predict decisions;
- ability to define the logistic plan;
- ability to establish critical values in terms of times and places;
- ability to determine task priorities;
- ability to assess risks;
- ability to make decisions and define logistic objectives.

Logistics command thus covers a wide spectrum of activities, such as the following:

- preparation of logistic support, including planning the logistic support, organizing the preparation of logistic elements for the consequent operations, preparing the logistic support area, inspecting the fulfillment of tasks, and providing timely assistance to subordinates;
- control of operations performed by the logistic support battalion NSE and the logistic support company.

The command deals with processes of adopting a decision, and planning and organizing the logistic support for combat units. The most important function of command is to control and organize the activities of all chiefs of logistics at all levels of command.

2. General conditions for planning and organizing the logistic support at the mechanized brigade level

The process of combat planning involves the following activities:

- study and clarification of tasks;
- definition of the logistic support priorities and of the logistic criteria for the selection of alternatives;
- evaluation of situations, proposals for and possibilities of logistic support for various operational alternatives and the provision of logistic support for the optimum alternative;

- finalization of the logistic support plan;
- clarification of the logistic support tasks to subordinates;
- organization of the logistic cooperation.

Logistic support planning may take place in consecutive steps or in simultaneous, parallel steps. Planning in consecutive steps is used when there is sufficient time. The planning process commences on the basis of a combat (operational) order or a combat instruction issued by a superior commander. The planning process takes place in stages, first at the ground force headquarters, then at the brigade level, and then at the battalion level.

Parallel planning is used when sufficient time is not available, usually when a battle is being conducted. Combat planning commences at lower command levels immediately after a resolution concerning the selected alternative is proclaimed by the superior commander, on the basis of preliminary combat instructions issued by such commander.

In relation to the decision-making process, combat planning, and thus the planning of logistic support, may be implemented using either a complete or an abbreviated decision-making process. An abbreviated decision-making process takes place while a battle is being conducted. Both decision-making processes employ identical procedures. They differ only in the scope of tasks being fulfilled within the scope of the individual steps. The level of detail of elaboration of these steps depends on the work methods used by the mechanized brigade staff.

A complete decision-making process requires a sufficient amount of time in which to make decisions. This method makes it possible to discover an optimum solution to a tactical and logistic problem through a detailed analysis of a number of probable alternatives of the operations of both sides of the battle. A complete decision-making process includes: a definition of the objective, the development of alternatives, the analysis, evaluation and selection of alternatives, and the development of the combat order.

An abbreviated decision-making process is used when time is limited. This process makes it possible to arrive at a solution to a tactical and logistic problem in shorter periods. The curtailment of the decision-making process is usually achieved by analyzing the most probable alternative of the combat unit operations. This method usually employs a more directive manner of control by the commander.

In the course of a conflict or a war, logistic support planning is included in the defensive operation planning. It is necessary to take into account the possibility of considerable losses and a much shorter period available for planning. Under these circumstances, parallel planning is more effective.

Under the present conditions, taking into account the projected time available, it is more realistic to employ consecutive planning (planning in steps). Consecutive planning is based on the fact that logistic support planning commences at the brigade headquarters level, following the receipt of an operational task from a superior level that is after the completion of the planning process at the superior level. Following the completion of the planning process at the brigade level, the subordinate formations and unit commence logistic support planning on the basis of the operational task assigned to them. In other words, planning is undertaken in steps, according to the individual levels of command.

3. Organizational structure of the brigade headquarters and the department of logistics

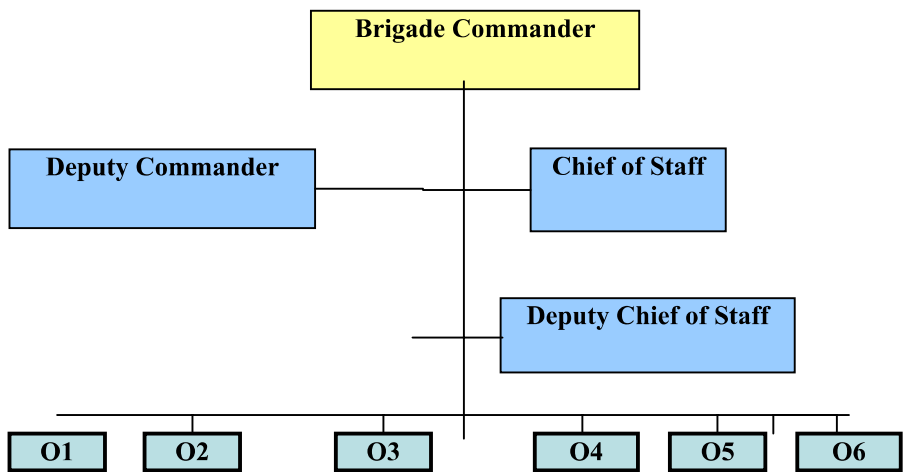


Fig. 1. Organizational structure of the mechanized brigade headquarters

O-1 Personnel department - responsible for the issues related to all staff (professional soldiers, conscripted soldiers, civilian staff, etc.).

O-2 Secret service and electronic combat department - responsible for the issues related to the acquisition and analysis of intelligence information and data, planning and control of reconnaissance operations, and co-ordination of all types of reconnaissance.

O-3 Operational staff - the most important component of the command, acting as the main coordinator of the operations of all staff components.

O-4 Department of logistics - deals with materiel supply, equipment maintenance, transport, and other services. The major issues for which this department is responsible are as follows:

- development of proposals for the employment of logistic support units and formations;
- submission of proposals for the logistic element deployment areas, routes of supply and evacuation;
- preparation of calculations, plans and instructions;
- determination of logistic training requirements;
- determination of materiel standards;
- monitoring over supply requirements, acquisition and distribution of supplies, and materiel record keeping;
- inspection of assignment and delivery of supplies;
- monitoring over and analysis of armament and equipment status;
- determination of organization and method of armament and equipment use, determination of implementation of maintenance, operation, and repair;
- organization of fleet service operations;
- establishment and coordination of movements of personnel and materiel by all types of transport;
- provision of food, accommodations, clothing, laundry, haircuts, baths; fire protection and ecology.

O-5 Department of command support - ensures support for the processes of command, control and logistic support. This department deals in particular with the following issues:

- organization of the command and control system;
- operability of communication and information technologies;
- security of the system in terms of confidential information protection; organization of support for the staff and headquarters of the brigade;
- expert control by way of a brigade commander in charge of the communication battalion.

4. Work procedure for the brigade chief of logistics in the process of planning and organizing the logistic support

4.1. Factors influencing the process of logistic planning

The department of logistics, headed by the chief of the department of logistics, is responsible for the fulfillment of logistic support tasks at the mechanized brigade level. In order to implement the logistic support at the mechanized brigade level, the chief of the department of logistics has the staff.

The chief of logistics utilizes the incoming requirements, the reports on supply quantities, and his personal information and indirect information in order to determine requirements, and evaluates the course of consumption and the possibilities of replenishment.

The chief of logistics assures the actual receipt, storage and distribution of supplies, and analyzes the combat area according to the given field conditions, using current information concerning situation of both sides of the battle.

The chief of logistics receives from the staff (O-3), as data necessary for the logistic support evaluations of the situation and losses, unexpected requirements, and requirements for prisoners of war.

Because the entire process of planning and organizing the logistic support is performed in collective manner (briefings), the staff involved receives considerably greater amounts of information and the adopted solution is more objective; as a result, the quality of the logistic support provided in each of the individual areas is much higher.

Factors influencing the process of logistic support planning are as follows:

- overall conduct of the operation - type and purpose of the combat operations, type of the battle formation, amounts of armament, equipment and materiel to be supported~ evaluation of the course of the combat operations, area to be supported, amount c supplies, losses, etc.;
- conditions for sustainable combat activities - intensity of the combat operations, impact on the possible use of the local resources, weather, morale, etc.;
- continuous nature of the support - necessary measures for the protection of the logistic support system and logistic positions

against enemy operations, necessary planning of flexible system of re-supply, maintenance of adequate reserves of the most important supplies for combat at all levels, and keeping of records concerning the frequency and methods of supply;

- change in positions - lines to which the war stocks and equipment available to forces may be moved;
- transport axes - possibility of maintaining the existing road and railway system in the area of combat operations.

A logistic evaluation of the most important factors will result in defining a logistic plan, on the basis of which a part of the combat order will be developed.

The logistic plan should include the following:

- logistic tasks;
- logistic priorities;
- logistic concept of combat;
- tasks for the subordinate entities;
- key times, according to or during which the given logistic operations must be performed.

4.2. Work Procedures for the Brigade headquarters in the Combat and Logistic Support Planning

The decision-making process is undertaken through partial work procedures used by the commander and the brigade staff. These procedures result from the work methodology of the mechanized brigade headquarters adopted for combat planning; this methodology is based on the algorithm shown in the following figure (fig. 2.).

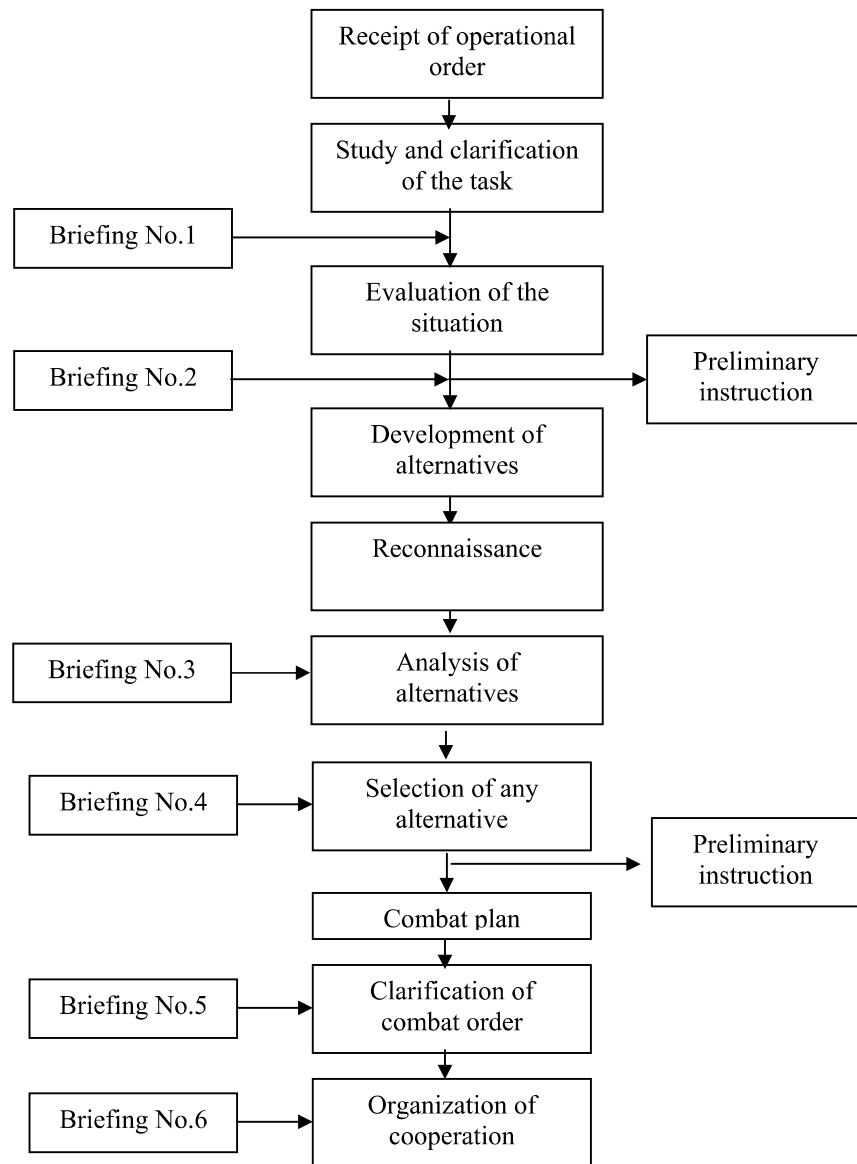


Fig. 2. Algorithm of the decision-making process of the brigade headquarters

4.3. Task Clarification Stage

From the viewpoint of the chief of logistics, the task clarification stage involves the following:

- objectives of the scheduled operations and the intention of the superior, position and function of the mechanized brigade in the operation layout, materiel requirements and restrictive standards;
- involvement of the superior in the logistic support at the level of the mechanized brigade and the conditions created by the superior;
- time calculation and the area in which the logistic support will be implemented.

The first step in this process is the study of the operational order. This is commenced on the basis of a receipt of a task (order) from a superior, and takes place in the O-4 department under the personal leadership of the O-4 chief.

In the process of clarifying the task and evaluating the situation, the chief of logistics informs the chief of staff of the possibilities of logistic support and of restrictions to the logistics. In the process of priority-based evaluation of the alternatives, the chief of logistics evaluates the influence of the logistic support and clarifies to the chief of staff the issues of logistic restrictions that may influence the individual alternatives. The chief of logistics obtains from the staff the information and data related to the amounts of equipment and number of persons, as well as data related to replenishment, and cooperates with other chiefs in the process of planning fire support, and the logistic support for the operations and protection of forces.

The study and clarification of the task results in the following:

- a) plotting of the basic task on the operation map of the chief of logistics;
- b) plotting of the logistic data from the superior (from Appendix P of the operational order);
- c) setting of the priorities (major tasks) of the logistic support and criteria for the logistic support for the task;
- d) understanding of the position and function of the brigade logistics.

The clarification of the task will eventuate in:

- requirements for the logistic operations - kinds and quantities of materiel, and from where and to where such materiel should be transported;

- the actual task;
- conditions and measures for the implementation of the task (in terms of time), amount of repairs, and services.

A logistic estimate is developed and a preliminary combat instruction may be issued; this instruction usually contains information on logistic support, stating specific tasks:

- basic measures of the logistic reconnaissance;
- delivery of materiel to formations and units from materiel supplies of the brigade depots;
- making transport capacities of brigade depots available;
- use of free transport capacities of subordinate logistic support companies;
- preparation of the logistic support battalion NSE for the receipt (acceptance of supplies) from the superior supply level;
- implementation of the actual transport and supply operations, and the like.

4.4. Preliminary Instruction Issuing Stage

The preliminary instruction contains:

- information for the department of logistics concerning the conclusions resulting from the process of the task clarification by the chief of logistics of the mechanized brigade;
- information concerning the restricting conditions in logistics;
- other information necessary for planning.

4.5. Evaluation of the Situation Stage

The O-4 chief and all officers of the department then evaluate the given situation. This evaluation covers the factors and conditions influencing the logistic support of the combat mission.

In the course of this process, the following are usually evaluated:

- In terms of the materiel logistic support for the task:
 - status and amount of materiel supplies at all levels;
 - total requirements for materiel, materiel consumption standards;
 - possibilities of generation and methods of replenishment of specified materiel supplies;

- capabilities of the logistic support battalion of the mechanized brigade and logistic support companies of formations (transport capacity, amount of supplies, losses, etc.).
- In terms of the technical logistic support:
 - possibilities and capacities of performing repairs related to the estimated losses;
 - possibilities and capacities of recovery and evacuation means of the brigade;
 - superior's forces and means functioning to the benefit of the brigade.
- In terms of services:
 - organization and manner of supplying forces with food and potable water;
 - organization and method of supplying fuels and lubricants; amounts, times and deadlines;
 - hygienic facilities for forces, clothing exchange, baths, etc. (linked to the possible use of the civilian facilities);
 - road network (transport of supplies, axes of movements, evacuation routes, etc.).

On the basis of calculations, it is necessary to evaluate the possibilities of logistics and to form conclusions from the evaluation of the situation. Group members cooperate with O-3 in particular in terms of ammunition consumption.

Within the process of situation evaluation, the O-4 chief receives documents from the chiefs of the groups, and, on the basis of such documents, evaluates the status and possibilities of logistics in terms of the fulfillment of the brigade tasks.

The bases for the logistic support for the individual alternatives are as follows:

- main tasks of the logistic support;
- analysis of the situation and capabilities of the units and formations of logistics;
- priorities and criteria of the logistic support;
- area capabilities (area for location of units and facilities of the brigade logistics, road network, sources of supplies, rate of availability of major kinds of armament, equipment and materiel to formations and brigade as compared to the given schedule, amounts of supplies, etc.);

- requirements of the commander (chief of staff) for the task logistic support.

The major objective and purpose consists of the following:

- to evaluate the positive and negative factors of the logistic support for the individual alternatives and to define the major advantages and disadvantages in terms of the major task of the brigade;
- to determine the optimum alternative in terms of the logistic support;
- to evaluate and to inform the commander of major problems and possibly to submit proposals for the elimination of such problems; to define conclusions and to submit them at the second briefing.

4.6. Analysis and Evaluation of the Alternatives Stage

When evaluating an alternative in terms of logistics, it is necessary to analyze issues such as the following:

- what must be done for the preparation of combat operations;
- which materiel and services are required;
- which units will be supported as priority;
- where the supporting units and the units to be supported are located;
- where the enemy is;
- which resources of supplies and services are available;
- where these resources are positioned;
- which means of transport are available;
- what the conditions for transport are and what security measures must be taken in respect of the transport;
- how much time will be required for supply;
- what changes of the position of the supply and logistic units are made;
- which information is necessary for non-interrupted supply;
- movement - changes in the positions of armament, equipment, personnel, and supplies as a part of the maneuver, deployment or withdrawal of forces, planning, identification of the route, time schedules;
- transport - means of positioning or repositioning the armament, equipment, materiel and personnel, including handling devices necessary for loading and unloading;

- mobility - quality and ability of military forces making it possible to move from one place to another while maintaining the ability to fulfill major tasks;
- transport network - all routes on which reinforcement and supplies are moved;
- flexibility - planning, organizing and implementing movements and transports so as to be able to react promptly to dynamic changes in the combat situation;
- simplicity - planning and procedures should be as simple as possible.

5. Conclusion

The brigade chief of logistics develops a Logistic Support Plan, recommends modifications in the consumption standards (in particular the consumption of ammunition and fuels and lubricants), taking into account the actual supply capabilities and the priorities set for the combat formations of the mechanized brigade. He develops Article IV of the combat order and Appendix P (Logistic Support) of the combat order, and hands them over to the chief of staff.

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