

Safety in logistics and logistics in safety? Article moot

Bezpieczeństwo w logistyce czy logistyka w bezpieczeństwie? Artykuł dyskusyjny

Security is not a stable state, moreover it should not be taken for granted neither as something permanent. In everyday life there appear continuous threats, both originating either from the forces of nature or the unintended and intended effects of human activity. In order to ensure the desired level of safety, the security system is created in which the key component is logistics. The integration of logistics' entities and strategic dimension of logistics (appreciation of the strategic function of logistics) cause the increase of the importance of integrated logistics systems and of security in logistics flows. Logistics activities aimed at optimization of the structures and processes within the network and logistics chains are playing an increasingly greater role from the perspective of safety management system.

Key words:

security, logistics, logistics management in security threats during crisis situations, security logistics, logistics in crisis situations.

Bezpieczeństwo nie jest stanem stabilnym, ponadto nie należy przyjmować go za pewnik ani jako coś trwałego. W życiu codziennym pojawiają się ciągle zagrożenia zarówno wynikające z sił natury, jak i jednostkowych i zamierzonych skutków działalności człowieka. W celu zapewnienia pożądanego poziomu bezpieczeństwa tworzony jest system bezpieczeństwa, w którym kluczowym elementem jest logistyka. Integracja podmiotów logistycznych i strategiczny wymiar logistyki (uznanie strategicznej funkcji logistyki) powoduje wzrost znaczenia zintegrowanego systemu logistycznego i bezpieczeństwa w przepływach logistycznych. Działania logistyczne mające na celu optymalizację struktur i procesów w sieci i łańcuchach logistycznych odgrywają coraz większą rolę z punktu widzenia systemu zarządzania bezpieczeństwem.

Słowa kluczowe:

bezpieczeństwo, logistyka, zarządzanie logistyczne zagrożeniem bezpieczeństwa podczas sytuacji kryzysowych, logistyka bezpieczeństwa, logistyka w sytuacjach kryzysowych.

Logistics in safety is a scientific discipline that creates a complex system of necessary solutions which are required to fully and rationally meet the needs of the executive authorities and security management. Logistics approach is aimed to take into account the economic capabilities of State to assure necessary training, and to gain and maintain the capacity and readiness to act at the desired level which is required to ensure the safety of individual.¹

The essence of elements of security in logistics

Although the state of security is extremely important to ensure existence and proper functioning of all subjects (including logistic

subjects) it should be remembered that it is not a stable one. In everyday and economic life there always are different threats resulting from the influence of nature or intentional and unintentional effects of other subjects' and people's action.

On account of occurring risks, the system whose integral element is logistics must function in order to achieve intended level of security. Basic tasks of logistics within this scope are the following: planning, accomplishing and controlling efficient and economic financial as well as informational flows. The action leads to uncover and minimize internal and external threats, eliminate or reduce the effects of factors connected with uncertainty and risk on functioning of a particular system to function in normal way.² It also leads to provide subjects with conditions to respond in critical situations in a suitable way. It should be

emphasized that security is extremely important element in ensuring efficient and effective accomplishment of logistic processes but the desirable quality should be kept as well.

Logistics management in organization may be connected with the necessity of making decisions in big uncertainty conditions. It may result from: strong dynamics referring to changes of organization's external environment (the effects of globalization and technological progress on economic subjects) and speed of processes taking place inside the organization (time and place compression concerning technological progress in the field of logistics, transport and IT implementation). Because of the fact that new risks occur and uncertainty regarding functioning of organization increases, there are new tasks for logistics: the necessity of reorganizing logistics processes, adapting the supply chains to new conditions, unpredictable and untypical waste management, etc.³ It can be stated that logistic system should ensure organization the possibility to respond to internal and external threats in closer and further surroundings, i.e. it should predict potential threats, work out suitable procedures concerning action and ensure organization the possibility to function in case of unfavourable conditions for it.

Reorganization may refer to different fields of enterprise's activity, e.g. elimination of ineffective supply of resources, subgroups, materials converted at different level (e.g. on the basis of looking for alternative sources of supply to ensure security of supply and reduce costs of activity) or intensification concerning distribution of ready-made goods which can be threatened by long-term sale (in conditions of strong competition, the enterprise must attract customers by means of different marketing and logistics tools, e.g. by introducing management system concerning relations of customers and integrated systems which ensure effectiveness in supply chain). Moreover, rebuilding the logistics processes may include taking action whose aim is to eliminate products which are inconsistent with binding standards and security access to suitable resources as well as production materials on the basis of the research of current supply sources regarding respecting the norms and legal regulations by suppliers and looking for new stock market.

Recycling the unpredictable and untypical waste especially when they are dangerous for the environment requires from the logistics to accomplish the tasks referring to effective waste of contaminated products, wares which do not meet norms and standards (which were removed from the market) and objects destroyed as a

result of natural disasters and other emergency situations (accidents, fires, floods, etc.).

Security in logistics referring to adaptation of supply chain to changing environment includes the following:⁴

- choosing optimal supply sources;
- ensuring substitution of production materials and possibility to change the suppliers;
- possibility to transform the supply chain to look for new sales market (ensuring sales security);
- analysis and assessment of all the instruments in the field of control the logistic chain including economic subjects referring to possibilities of critical situations;
- working out the security procedures, ways of action and counteraction concerning unfavourable changes in Commercial Law and using monopolistic practices or dishonest competition.

Although the term security in logistics is a wide one, it is often considered to the security referring to supply chain, transport security, informational security or security management in enterprises because these fields determine effective action of entire company and are exposed to various threats the most often. It must be emphasized that logistics security system should ensure protection of all elements which take part in logistic processes, i.e. goods, objects, devices, information and employees. The variety of activities and initiatives should be taken up to ensure protection. They are the following:⁵

- permanent physical protection;
- objects security audit;
- trainings for the workers within the scope of logistics security;
- audit and monitoring the drive routes;
- installing electronic security systems;
- working out and introducing action standards;
- security management;
- minimizing the waste in warehouses;
- optimization the costs of security, etc.

Furthermore, analysis and assessment of flow directions including the possibility of withdrawing a ready-made product from the market and faulty materials as well as ready-made goods from production and distribution systems should take place in every business. Protection in the field of material flows should be connected with suitable activities and procedures within the sphere of informational security (both aspects of logistic security should be taken into account in business strategy).

As it has been mentioned recently, security in logistics means all procedures and institution's policy within the scope of security management including indicating accepted level of risk by the company. Security is management's element in

every organization. It includes among other issues: using and supporting business practices to raise general level of security in organization. From this point of view logistics closes the circle concerning the process of enhancing security because it is the discipline of horizontal orientation in relation to vertical order of enterprise's organizational structure which connects and penetrates all the organization's functional departments. As a result, logistics' task within this field is to ensure logistic support within the scope of security practices in all organizational cells of the enterprise. What is more, every organization should have processes concerning the control or review of security policies and procedures in order to identify dangerous shortcomings — results of reviews should have an influence on procedures and security policy.

Logistics security is often lead to secure practices management. From this point of view security in logistics means carrying the procedures out in a suitable way and its role in logistic processes is ensuring efficient, effective and uninterrupted flows of materials and information. Logistics security manages implementation of security procedures and introduces functional reviews of entire process of company's action (monitoring and control processes).

It is worth emphasizing that in recent years the problem of security concerning achieving logistic processes has been acquiring significance. The need to exceed creating security as a part of particular transport or economy branches is particularly emphasized here. At the age of automation and IT implementation accomplishing logistic processes often needs particular standard decisions at domestic and international level (standardization need) as well as other initiatives within the scope of security which consider the complexity of these processes regarding the number of subjects taking part in accomplishing a particular process, their variety, the scope of action (international corporations, international and global supply chains, enterprise's activity specialization and logistic services outsourcing). Every company which wants to accomplish logistic processes in effective and efficient way, ensure success on the market and protect its activity should focus on ensuring security regarding running activities and logistic processes whose accomplishment is an integral element of their action.

Security in logistics vs. system approach

In accordance with known logistic rule concerning system thinking all processes which

occur as a part of particular system should be examined from overall perspective which allows to avoid suboptimization and achieve the desirable synergic effect. The term system means a particular whole which consists of connected elements created to accomplish particular functions.

From logistic perspective, in accordance with the definition proposed by P. Blaik, *logistic system means a collection of connected logistic elements and transformational processes as well as organizational connections having specific properties which take place within the collection mentioned.*⁶ It means that only those processes which were subordinated to organizational solutions are included in logistic system. In the light of the definition mentioned it can be said that the security of logistic system requires creating particular coordination procedures, organizing and controlling the flow of information and materials.

A. Szymonik proposed another definition of logistic system of security system. According to the researcher logistic system of security system is a collection of management bodies and organizational units which are linked with informational and powering relations whose main aim is ensuring and keeping the continuity of logistic processes accomplished for their security which may be disturbed as a result of the influence of internal and external threats.⁷

Logistic system depending on the needs, organizational structure, size, economic sector, character of running activity, technical and computer infrastructure or legal status may consist of particular logistic subsystems which are the following:⁸

- supply subsystem,
- production subsystem,
- distribution subsystem,
- transport subsystem,
- storing subsystem,
- financial subsystem,
- orders subsystem,
- recycling and waste management subsystem,
- ecological subsystem,
- informational subsystem,
- protection subsystem,
- coordination subsystem,
- decision taking subsystem,
- social and living services subsystem,
- logistic security subsystem whose task is to ensure security in accomplishing logistic, tasks as a part of all other subsystems.

It should be remembered that some subsystems mentioned above may or may not occur in a particular organization and can be in different place in organizational hierarchy. For instance, there is not

production subsystem in a service centre or commercial company and in production company does not have to be social and living services subsystem whose functions can be fulfilled by, e.g. financial department of the company. In accordance with system thinking rule it must be emphasized that effectiveness and efficiency of functioning logistic systems and security subsystem connected with them should be examined from overall perspective to avoid the phenomenon of suboptimization in particular subsystems. It means that in case of disruptions in functioning of a particular logistic subsystem, their causes must be analyzed as a part of that subsystem as well as other subsystems because they are connected with each other and create the integral entirety. As far as security system is concerned, it is worth adding that eliminating potential risks in one sphere of company's activity is not tantamount to ensuring security in other activity fields.

Analysing the following terms: logistic system and security system in economic organizations and the public sector institutions, it can be concluded that in both cases there are some common elements. Not only in security, but also in other logistic systems there are attributes characteristic of each system: management and executive bodies, elements and system relations as well as aim of activity. Integration of logistic processes (including processes concerned with security) in one system allows to make a system analysis, determine relations and connections between particular elements and the assessment of their influence on the level of efficiency and effectiveness of the system.

Integration of logistic subjects and utmost dimension of logistics (enhancement of strategic functions of logistics) cause a rise in importance of integrated logistics systems and security of flows in logistics. Logistic activities oriented at optimization of structures and processes as a part of logistic networks and chains play more and more important role from the perspective of security management system as well. It means that activities and logistic processes which are taken up should be aimed to improving and looking for new opportunities and logistics abilities to ensure rise in effectiveness and efficiency of the subject or logistic subjects within the scope of flows security.

The basis of each integrated logistic system in modern company is the integrated computer system of management which serves as computer support of management processes in logistic system including logistic security subsystem.

ERP can be rated among the integrated computer management system. These systems are used in 70% of enterprises and public institutions in

the western Europe, Northern America, Australia and New Zealand.⁹ ERP systems bring their users a lot of benefits which can be the following:¹⁰

- perceiving the organization as an open system (opportunity to integrate company's computer system with surroundings thanks to homogenous computer standards and automation of security processes and data identification);
- illustrating integrated nature of economic system, broader use of benefits from economy based on knowledge (faster information share, cooperation and mutual transfer of achievements in Research and Development sphere);
- shaping the enterprises oriented at accomplishing processes (process knowledge of logistic systems of companies);
- rise in effectiveness of operational activities, ensuring users of the system access to data in real time, possibility to adapt introduced systems to the needs and requirements of security system, creating own system depending on the needs and requirements of organization owing to modular structure of ERP.

ERP class systems focus particularly on adapting the system to the needs and requirements of users in various aspects concerning taking action (security of information, subsystem of supply, transport, storage management, distribution, waste management, etc.) thus it is friendly and easy assimilable for users. It also makes it possible to manage the whole organization and particular processes in the extensive way as well as integrate with external surroundings keeping specific norms and security processes. On account of the complexity and clarity ERP class systems are gladly used by enterprises. It must be emphasized that in their case it is necessary to work out specific norms and security procedures because of the fact that attacks on the entire server or particular applications may be a threat for the whole system of logistics organization.

To sum up the discussion concerning security in logistics it must be stated that flow security is the significant factor of every system and logistic processes taking part in it. Furthermore, every subject which takes up logistic action should take specific norms and procedures into consideration — without them effective and efficient functioning of organization, counteracting the threats and eliminating their effects are not possible. Moreover, it must be remembered that, security subsystem (similarly other subsystems functioning as a part of a particular organization) should be included in entirety of organization's logistic system according to the key rule in logistics concerning thinking of the whole. What is more, it cannot be examined separately from other

processes and logistic activities which occur in enterprise. It can be said that logistics and security are two connected aspects of functioning of every economic subject which should be considered in its strategy and organizational structure.¹¹ It must be taken into account that security in logistics can have various aspects which among others are the following:

- security in supply chain,
- work security,
- informational security,
- ensuring availability of resources,
- ecological security,
- response procedures in critical situations, and other aspects.

All the aspects, similarly as all the elements of security system and connections between them, should be illustrated in system's logistic structure of enterprise to ensure desirable security level and create conditions for satisfying needs fully and rationally and accomplishing aims of organization as well as its users.

Logistic security includes business use and practices support which raise security level. Security depends on carrying out right procedures in proper way and logistics in security causes effective spread of those procedures. Every essential organization should have a well-thought-out security policy and correctly defined conduct procedures. It will not function in the appropriate way when management or board of subject inform the staff and newly employed people about these procedures in a poor way. Well-thought-out logistics in security protects forces and means for propagation of information concerning procedures and security policy as well as continuous monitoring the level of worker's preparation. Logistics in security manages the implementation of security procedures. It introduces functional reviews of entire process referring to functioning of a company in any fields connected with security. The classification of security types presented above is useful only when makes it possible to plan and respond to problems and issues included there in a better way. The whole package of types and dimensions of threats

presents the aspect of security or the sense of its lack. It also shows the following types of security: physical, technical parallel to logistic protection which should aspire to improvement of system's ability to independent protection and defence. The system is never secure and protections should not be static — they should adapt to the topical conditions.

Practically and theoretically, security in logistics or in logistic systems is not a slogan, although everything seems to be simple. Designing and building production or storage object are enough so as to parameters of all positions correspond to the norms, regulations and directives. It is worth being aware of extra outlays concerning suitable equipment which ensures security. Outlays destined for the aim compared with costs of entire investment — factory or storehouse are little. From economic point of view, we should expect the fast amortization of costs owing to minimization of risk referring to occurrence of expensive accidents or breaks at work because of damage. The problem occurs when we deal with functioning logistic system which is not secure enough. In this case each stoppage in organizational action connected with adapting activities to legal requirements means a huge loss.

The most popular mistakes referring to secure projects of logistic systems result from the lack of experience and ignoring threats. In the first place, mistakes concerning formulating principles of logistic projects should be mentioned. Proposing this system it must be remembered that a particular investment must meet binding norms. They must consider predictable changes at employment level, size of production, the number of handling or the size of state in warehouses. It is worth adding, that available analytic tools and forecasts do not always coincide with the reality and a dynamic growth in economy caused by the fact that Poland joined the European Union and correlation or effect are rather unpredictable. Storage base which was created many years ago did not consider a number of factors and costs of renting and keeping storage area located in city centres were not without importance.

Przypisy

¹ A. Szymonik, *Logistyka w bezpieczeństwie i bezpieczeństwo w logistyce*, "Logistyka" No. 2/2011, p. 3.

² A. Szymonik, *Logistyka w bezpieczeństwie*, Difin, Warszawa 2010, p. 37–38

³ K. Ficoń, *Inżynieria zarządzania kryzysowego Podejście systemowe*, wyd. Bellona, Warszawa 2007, p. 46–47.

⁴ Z. Grzywna, *Logistyka jako element systemu bezpieczeństwa. Zarys problematyki*, wyd. WZMiJO Katowice 2013, p. 41–42.

⁵ Szerzej. *Doradztwo logistyczne: Bezpieczeństwo logistyczne*, na: <http://www.institutintl.pl/pl/oferta/bezpieczenstwo-logistyczne>

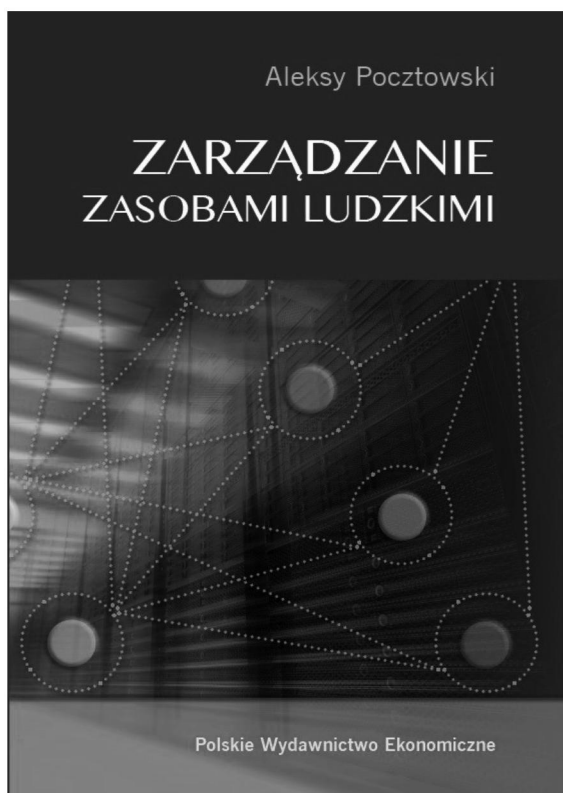
⁶ P. Blaik, *Logistyka*, wyd. II PWE, Warszawa 2001, p. 53.

- ⁷ A. Szymonik, *Logistyka w bezpieczeństwie...*, op. cit., p. 157–193.
⁸ M. Brzeziński, *Systemy w logistyce*, WAT, Warszawa p 2007, p. 25.
⁹ A. Szymonik, *Logistyka jako system racjonalnego pozyskania wyrobów obronnych*, Warszawa 2007, p. 207.
¹⁰ *Słownik terminologii logistycznej*, Biblioteka Logistyka, Poznań 2006.
¹¹ E. Nowak, *Logistyka w sytuacjach kryzysowych*, wyd. II, AON, Warszawa 2009 p. p 31–33.

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PWE poleca



Wiedza, umiejętności, zdolności, zdrowie, motywacja i wyznawane wartości przez osoby świadczące pracę decydują o ich zatrudnialności, stanowią źródło konkurencyjności organizacji oraz pomysłowości regionów i krajów. Upowszechnianie się tego faktu w świadomości społecznej prowadzi do wzrostu profesjonalizmu w zakresie zarządzania zasobami ludzkimi, które ewoluuje od rutynowego administrowania w kierunku zrównoważonego zarządzania, integrującego – w strategiach i metodach rozwiązywania kwestii HR – aspekty ekonomiczne, społeczne i ekologiczne.

Zarządzanie zasobami ludzkimi, jako dziedzina badań oraz wdrożeń praktycznych rozwiązań dotyczących funkcjonowania ludzi w organizacji i na rynku pracy, jest związane z wieloma wyzwaniami, które determinują jego obecny i przyszły rozwój. Zaliczyć do nich należy zmiany technologiczne, które zmieniają charakter pracy oraz polityki i praktyki HR, czyniąc je coraz bardziej sieciowymi, zdalnymi i wirtualnymi. Zmiany demograficzne, generacyjne, w połączeniu z rosnącą mobilnością na rynkach pracy, to kolejne wyzwanie w obszarze zarządzania zasobami ludzkimi, które wiąże się z rosnącą różnorodnością. Należy też pamiętać o presji płynącej z rynków pracy na wzrost efektywności pracy, optymalizację kosztów i innowacyjność usług HR.

Zasygnalizowane powyżej kwestie stanowią przedmiot rozważań w książce, w której autor przedstawia problematykę zarządzania zasobami ludzkimi całościowo, łącząc jego teoretyczne i praktyczne aspekty oraz podkreślając znaczenie kontekstu w rozwijaniu teorii i doskonaleniu praktyki w tej dziedzinie zarządzania.

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