



SUPPLY CHAIN MANAGEMENT - SAFETY ASPECTS

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ABSTRACT. Developing economy, growing customer requirements and competition make the service level higher. Delivery safety - as the highest priority - has to be maintained at the same time. Customers more and more often require transport to be very flexible, fast, and complex in terms of carrying every quantity of goods of different sizes, from and to different countries, through customs clearance, storing and distribution of shipments. Meeting these requirements depends on complex information on transport processes and their safety. The article presents safety foundations and institution Authorized Economic Operator - AEO in supply chains.

Key words: Authorized Economic Operator, supply chains, safety.

INTRODUCTION

Supply chain management in companies of well-developed countries is considered to be one of the most important business issues. CEO's of these companies realize that achieving the leader's position on more and more competitive markets is only possible when they create a flexible, intelligent and adjustable supply chain with their partners.

Besides, the globalization itself at the rate and range that is with fear or hope observed nowadays would not merely be possible without coordinated flows, efficient moving resources management and "making distances shorter" [Magier 2008].

The awareness of profits that may be obtained by improving supply chain and logistics management is in Poland still in the initial phase, which is far too little. What is needed is courage, to trust your partners; strength, to break the stereotypes and fears in your own company; and charisma, to make others follow you. That is why it is worth taking on the challenge. The ones that succeed will be one step ahead of the competition.

In order to continuously develop on the competitive market the companies must, among other things, design more and more complex and longer supply chains. New distribution markets, bigger and bigger number of suppliers, which are scattered all over the world, foreign production - all of these create threats that companies have not come across before. They may influence not only logistics issues but also the other scopes of activity. Therefore, it is worth thinking of a system that will make this scope of activity stable and guarantee safety of the brand itself.

As it results from a research made by Stanford University, published by The Manufacturing Institute, a research unit of National Association of Manufacturers (American organization associating production companies) the safety improvement programmes may be very profitable. It turns out that companies, which invested in supply chain security improvement, may expect shorter transport time

and lower warehouse stock. The activities making the supply chain more secure and transparent made it possible to shorten by 50% the time needed to identify and solve transport issues, and reduce stocks in own and external warehouses by 20%. The other researched companies could also show remarkable profits, i.e. averagely 29% shorter transport time and 50% higher assets transparency rate.

The engineering and its wide range of tools is a relevant support to the managers. What is worth remembering is that they should be used with consideration to all correlations matrix, so that one threat does not increase the other one.

The goal of the article is to present the advantages of being the "the authorized AEO", which result from the supply chain security, in particular, by identification and strengthening of the weakest point of the system.

SUPPLY CHAIN SENSITIVITY TO THREATS

Contemporary supply chains are becoming more and more sensitive - which makes them more susceptible to disturbances. Thus, the meaning of risk management in material handling is increasing.

Main reasons of the above mentioned are:

- searching for competitive advantage in supply chains - for example: looking for reserves by means of so called lean practices, deliveries from low cost countries (LCCS), Just in Time, outsourcing, one-source procurement - activities which have so far been considered too risky,
- technological changes - the risk connected with new technologies is e.g. the e-economy risk, being addicted to new banking technologies, threats from hackers or making supply chain too "stiff" which disturbs changes of relations between the links,
- globalization of economy - global competition leads to putting company at risk connected with expansion beyond the regional and country borders, concentration of business activity, which not only consists in uniting companies into supranational organizations, but also in cooperation within extended supply chains and global networks.

Each step of a company that makes its range, number of customers or markets bigger also makes the supply chain more complex. Therefore, it brings in a new danger and when the company is not prepared, it may result in the domino effect - rapidly increasing wave of negative events.

The full responsibility for consumer security and goods quality in global supply chains is rather complex and it encompasses among other things:

- guarantee of production process, transport and warehousing quality for the utilized production technology and goods quality parameters (certified by norms and systems, e.g. ISO, HACCP, BRC, IFS, SQF in different countries),
- excluding product counterfeits - reliable, unambiguous and undeniable identification and control of each and every section of raw materials, semi- and finished goods flow as well as stock keeping in supply chain,
- ability to quickly find location of a product on the market and within the supply chain as well as selection of product groups coming from the same batch / lot or delivery,
- guarantee of immediate withdrawal of any goods posing danger to health or life from the market and all supply chain locations [Śliwczyński 2009].

Reaching the required supply chain security entails choosing proper technical and technological solutions of all processes and operations in each supply and transport chain link, taking the characteristics of goods and means of transport to be used in each link into consideration. So serious organizational solutions require market-forced coordination activities at the company level, however, there are also some standards that must be imposed by a superior body, which is the European Commission.

THE INTERNATIONAL CHARACTER OF HAZARDOUS MATERIALS TRANSPORT IN SUPPLY CHAINS

Assuring security of business activity is the part and parcel of every management concept. It does not only concern business activity but also society organization, local governments and other institutions, activities such as armed forces, police, schools or hospitals [Ciesielski 2009].

As for the supply chains security the used methodology should be agreed between the links so that it assures clear communication, efficient information flow and, above all, effective coordination of actions, which guarantees good cooperation and clarity within supply chains.

It is particularly significant in international supply chains where only by cooperation, negotiations and mutuality can such a standard be achieved within the Community.

In turn, each security standard that is introduced can support the development of information and telecommunication technologies as well as contribute to improvement of supply chain effectiveness.

Achieving the appropriate security level is nowadays constrained by lack of detailed information on shipments within the EU. The consigners can give false information about the load to the insurance company and/or hauliers taking no responsibility for that. What would undoubtedly be an advantage is sending such information electronically to public institutions that could evaluate the threat and security level of transport as well as make an inspection, if necessary.

Information about shipments (first of all: origin, content, owner, point of destination, route and means of transport) should be forwarded electronically to the institution assigned by each community state before the shipment takes place.

A member country should, on its own initiative or on demand, forward the received information to the all interested member countries. Based on the agreed threat management strategy the member state should make an inspection in order to verify the information in terms of security and completeness.

Europe feels the need of having a coordinated response on organized crime and terrorist activities within international supply chains. National activities and initiatives are insufficient to deal with the international nature of threats.

In order to make Europe safe and secure the Community should assure the following:

- coordination of mechanisms of "rescue activities" in order to assure radical response, adequate to the scale of dangerous incident,
- support of trainings and informing about threats and threat recognition strategies,
- assurance of unified inspection of international shipments in EU countries,
- development of information systems required to achieve security goals for supply chains in Europe.

Fighting the terrorism is difficult since states lack features needed to eliminate transnational organized crime. States are so organized that they can face problems caused by other nations and it is international cooperation that is needed to fight terrorism effectively. Close cooperation, various sorts of armed forces, diplomacy, intelligence, counter-intelligence, police and administration [Żukrowska, Grącik 2006] are required in order to oppose new threats effectively.

Since the spectacular terrorist acts took place, there has been a problem of assuring security of supply chains, connected with increasing logistics service quality, which is one of main determinants of cargo transport security. Thus, the European Commission decided to introduce supply chain security standards for international hauliers being the so-called "Authorized Economic Operator".

AUTHORIZED ECONOMIC OPERATOR IN SUPPLY CHAINS

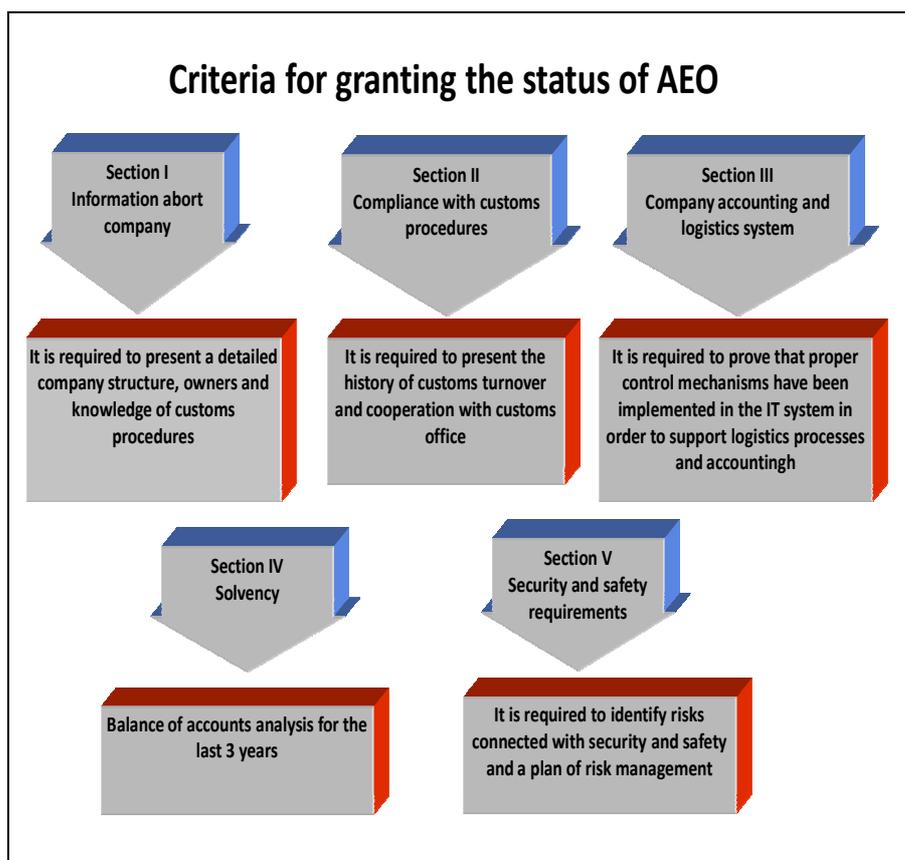
The customs authorities in Europe had to face a problem of how not to make trading difficult and make the international goods flows secure at the same time. The threat from terrorism has become the priority of the EU authorities. These two opposite issues - the need of making trading easier and more secure have been reconciled in one mechanism - the Authorized Economic Operator - AEO [Kasprzak 2008]. According to EU regulations, AEO is every supply chain actor that complies with certain conditions. The conditions are a wide range of criteria to be fulfilled by the entrepreneur and which are thoroughly verified by customs authorities before the entitlement with AEO. Complying with the conditions ensures the EU customs authorities that the AEO is a reliable partner that knows how to take care of supply chain security [Nowak 2008].

In Poland, the AEO was introduced on 1st June 2008.

The functioning of AEO should be based on security control at the point of receiving goods into the Community's customs area and on fiscal control in internal offices at the same time.

The essence of the "authorized operator" is to secure the whole supply chain by, in particular, identification and enforcement of the weakest link in the system, limiting negative results of increased goods turnover control, identification of the most reliable companies in order to exclude them from the standard control process and concentrate on other business units.

The entitlement process is precise and consists of five areas which describe the position of the company in detail.

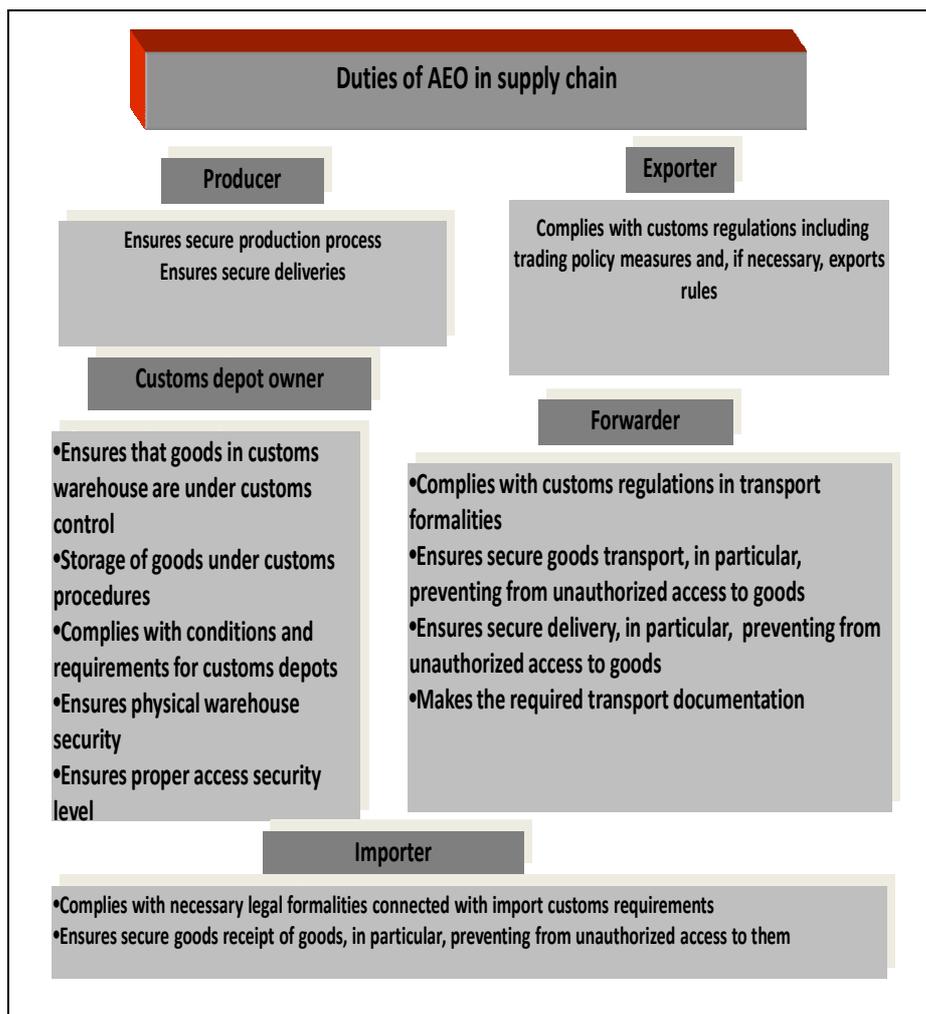


Source: Own sources

Fig. 1. Criteria for granting the status of AEO
Rys. 1. Kryteria uzyskania statusu AEO

The institution of AEO was introduced into the EU law by the regulation no. 648/2005 of the European Parliament and of the Council of 13 April 2005 amending Council Regulation (EEC) no. 2913/92 establishing the Community Customs Code (OJ L.117, 4.5.2005, p. 13), however, its application depended on creating and accepting the executive regulations. It became possible on 1 January 2008 when regulation no 1875/2006 of 18 December 2006 amending Regulation (EEC) no 2454/93 laying down provisions for the implementation of Council Regulation (EEC) No 2913/92 establishing the Community Customs Code (OJ L 360, 19.12.2006, p. 64).

The Executive Regulation regulates the procedure of granting the AEO status and defines the requirements and criteria to be fulfilled by the entrepreneur applying for the status. It indicates the advantages of having the AEO certificate, rules of entrepreneurs and customs authorities.



Source: Own sources

Fig. 2. Duties of AEO in supply chain
Rys. 2. Obowiązki AEO w łańcuchu dostaw

It should be highlighted that the AEO certificate is given out to the company and not to their customers. Thus, these are only AEO that may benefit from it. This general rule applies to all companies within the international supply chain. The certificate confirms reliability and honesty of the company, ensures prestige, privileged treatment of customs authorities, and easier customs inspection in all EU countries and beyond EU in case of bilateral and multilateral agreements, increases supply chain security.

Benefits resulting from having the AEO certificate are:

1. Lower number of physical and document controls

The owner of the AEO certificate is subject to lower number of physical and document controls than other entrepreneurs. It means that AEO has lower risk score and benefits from faster customs clearance procedure (adequately to the type of certificate).

AEO has lower risk score in all EU countries since the status is honoured in all member states based on art. 5a of the Community Customs Code. Lower risk score should be implemented in all risk management systems and customs activities in order to make AEO benefit from the everyday business.

2. Preferential conditions for controlled shipment

If after the risk management analysis the customs office selects shipment with entry summary declaration or customs entry made by AEO for further control, then the office makes the control in the first place. It means that the shipment will be controlled in the first place, unless they do not come from AEO.

3. Choosing the place of control

Entrepreneurs do not need the AEO status to get the entry summary declaration which is assured based on the current customs regulations. However, if the company applying for entry summary declaration has got AEO - customs simplifications (or combined certificate), the customs authorities will not reconsider the conditions needed to be fulfilled during the AEO status granting procedure.

4. Fewer data for the entry summary declaration

AEO importers and exporters are automatically authorized to submit the entry summary declarations with fewer data.

AEO transport operators, forwarders and customs officers can only make use of it for the sake of their customers who have the AEO certificate - security and safety or AEO certificate - customs simplifications / security and safety.

5. Prior notification

In case of the entry summary declaration of AEO the appropriate customs office can notify the AEO before goods are received/shipped to/from the Community that the shipment has been selected for further physical control based on a risk analysis for security and safety. The notification will be sent only when it does not put the control at risk. The customs authorities, however, can carry out a physical control even if the AEO has not been notified.

6. Additional advantages

Every entrepreneur that fulfills the criteria and acquires the AEO status can achieve benefits that are not directly related to the customs issues. Investments of entrepreneurs made to improve the security and safety standards can positively influence the following areas:

- control of goods flow from producer to customer ("visibility and tracking"),
- employee security,
- creation of standards,
- selection of suppliers and investments,
- transport security,
- building the organizational infrastructure awareness and possibilities,
- cooperation between the supply chain actors,
- active technological investments and voluntary observance of security requirements.

Some of benefits resulting indirectly from the abovementioned positive effects are:

- reduction of thefts and losses,

- fewer delayed shipments,
- planning improvement,
- customer loyalty improvement,
- bigger employee commitment,
- reduction of the number of accidents related to security and safety,
- lower supplier control costs and cooperation improvement,
- reduction of crime and vandalism,
- reduction of problems by recognition of employees,
- improvement of security and communication between supply chain actors.

7. Making AEO a secure and safety-assuring trade partner

The AEO that meets the security and safety requirements can be acknowledged as a secure and safety-assuring supply chain partner. It means that AEO undertakes all possible actions to reduce threats to the involved supply chain. Thus, the AEO status improves entrepreneurs' reputation. Furthermore, possessing the status of a secure and safety-assuring supply chain partner makes the security control easier. A businessman being an AEO can be then chosen for a trading partner instead of the one that is not an AEO.

8. Mutual acknowledgement

The Community's goal is to acquire mutual acknowledgement of the AEO certificate - security and safety in all countries that implement the AEO programme or its equivalent. That is why an entrepreneur with the AEO certificate - security and safety will achieve the same benefits in third countries since the certificate will be acknowledged by that country. Mutual acknowledgement of not only AEO but also control standards and tools is of key significance. Since many members of the World Customs Organization (WCO) committed themselves to implement WCO SAFE, in many parts of the world comparable international means and mutual acknowledgement will be implemented.

Using the entry summary procedures by an authorized customs representative is useful for customer due to convenience, product availability independently from queues in customs offices, customs offices working hours or officers acknowledgments.

In the future, the international trade security requirements will be even more restricted. In July 2009 additional duties will be imposed on exporters and importers, i.e. a forward declaration - informing about an intention of goods transport. An authorized entrepreneur will be able to submit declarations with fewer data on security. Furthermore, the AEOs will be informed about the goods control in advance.

Each member country's administrative bodies and the European Commission consider making other things easier for the Authorized Entrepreneurs. The privileges will also concern the fiscal issues.

SUMMARY

Assuring supply chain security is the prior goal of logistics. Security assurance became another requirement apart from getting goods to the right place, at the right time, in the right quantity, quality etc. Security has become a significant issue in the face of the globalization processes of the recent years. This is mainly influenced by economy globalization processes, terrorist threat to logistics processes or strategic investment plans on which the existence of nations can depend (for example, in power industry).

One should be aware that supply chain security is a wide and complex category and is not only formed by potential terrorism factors (as the biggest threat). Supply chain security is determined by

many other factors such as weather conditions, unexpected events (accidents). It must be remembered that supply chain security must be considered taking all supply chain actors into account.

The quality and security of logistics services is significantly increased by quality standards like ISO, HACCP, SQAS etc. Many current regulations, legal norms, storage guidelines for dangerous goods etc. are only a partial (without "new quality") approach to the supply chains security issues [Nowak 2008].

It may be presumed that the popularity of AEO certificates among business units will be rising together with growing number of its owners. Big concerns will put pressure on their suppliers so that the whole supply chain is considered secure. It should be presumed that AEO certificates will in some branches become standard, similarly to the ISO certificates. AEO status being a competitive advantage factor for companies will probably make the customs administrations of all EU help local companies get the status in order to support their economies.

What would make AEO more popular is surely bigger European Commission and state administration activity in terms of making it easier for the Authorized Entrepreneurs with other customs and fiscal issues as well as acknowledging the EU certificates by the most important trading partners.

Entrepreneurs should analyze their situation, plans for the future and their business environment, and then decide if ever and when they should try to get the AEO status. Undoubtedly, it will take a form of a profit and loss account. What must not be neglected in the account is an additional benefit from getting the AEO - an opportunity to check and improve the existing company's risk control and management system, which will make all processes more transparent and improve the supply chain security.

The popularity of AEO certificates has been increasing in line with the increasing number of certified companies. Big concerns are putting pressure on their suppliers so that the whole supply chain is considered to be safe. AEO certificates, similar to ISO ones, are becoming standard in some business areas.

Since the AEO status is a significant competitive advantage factor, it may be expected that companies which are not certified are threatened by stagnation and losing potential customers.

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ZARZĄDZANIE ŁAŃCUCHEM DOSTAW - ASPEKTY BEZPIECZEŃSTWA

STRESZCZENIE. Rozwój ekonomii, wzrastające potrzeby klientów oraz konkurencja przyczyniają się do wzrostu poziomu obsługi klienta. Jednocześnie musi być zapewnione bezpieczeństwo dostaw, traktowane jako najwyższy priorytet. Coraz częściej klienci oczekują aby usługi transportowe były bardzo elastyczne, szybkie i kompleksowe, oferujące zarówno

przewóz każdej ilości towaru o różnych wymiarach w połączeniach międzynarodowych jak i odprawę celną oraz magazynowanie i dystrybucję towarów. Sprostanie tym oczekiwaniom wymaga posiadania kompleksowej informacji o procesach transportowych i ich bezpieczeństwie. Praca przedstawia zasady bezpieczeństwa oraz instytucję Uprzywilejowanego Przedsiębiorcy AEO w łańcuchu dostaw.

Słowa kluczowe: Uprzywilejowany Przedsiębiorca, łańcuchy dostaw, bezpieczeństwo.

LIEFERKETTEVERWALTUNG - SICHERHEITSASPEKTE

ZUSAMMENFASSUNG. Die Entwicklung der Wirtschaft, steigenden Anforderungen der Kunden und der Wettbewerb verursachen das Niveau des Kundenservice zu erhöhen. Gleichzeitig muss die Liefer-Sicherheit, als die höchste Priorität, aufrechterhalten werden. Die Kunden erwarten dass Verkehrsdienstleistungen sehr flexibel, schnell und komplex sind in Bezug auf den Transport von jeder Menge von Waren in verschiedenen Größen, von und zu verschiedenen Ländern, einschließlich die Zollabfertigung wie auch die Lagerung und die Verteilung von Waren. Die Erfüllung dieser Anforderungen ist abhängig von komplexen Informationen über Transportprozesse und ihre Sicherheit. Der Artikel vorstellt die Grundsätze der Sicherheit und die Institution des Zugelassenen Wirtschaftsbeteiligten AEO in Lieferketten.

Codewörter: zugelassener Wirtschaftsbeteiligter, Lieferketten, Sicherheit.

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