

# THE PROBLEMS OF MANAGEMENT OF THE LOGISTIC AND CARRIAGE PROCESSES IN THE INTERNATIONAL ENVIRONMENT

## MANAGEMENT- UND LOGISTIKPROBLEME DES FÜHRUNGSPROZESSES IM INTERNATIONALEN BEREICH

### PROBLEMELE DE MANAGEMENT ALE LOGISTICII ȘI ALE PROCESULUI DE CONDUCERE ÎN MEDIUL INTERNAȚIONAL

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#### **Abstract**

*The management of the logistic and carriage processes in the manufacturing enterprises is as much effectively executed as common possibilities of their own information and communication technologies and their application's rate are effectively utilized. In the small and medium enterprises (SME), divisions or responsible specialists that have to manage such processes do not always exist. It is the cause that exact specification of information and communication processes creating information management support absents or is inaccurately determined. We pointed on the frequently occurring case when the data format is not supported with enterprise information systems. In 2012, we were researching how information supports of logistic and carriage processes are made in the small and medium enterprises. We were trying to find out some difficulties as well as causes occurred by cooperation between manufacturing enterprises in the international environment in order to do them more effectively. We have summarized our researching in this article.*

#### **Zusammenfassung**

*Die Verwaltung der Logistik und der Führungsprozesse in den Bearbeitungsunternehmen ist effektiv angewandt so wie die gemeinsamen Möglichkeiten der eigenen Informations- und Kommunikationstechnologien und deren Anwendungsrate. In Klein- und Mittelbetrieben (KMU) gibt es nicht immer Bereiche oder Fachkräfte, die solche Prozesse führen können. Das ist der Grund, wofür eine genaue Spezifikation des Informations- und Kommunikationsprozesses, der eigentlich die Grundlage des Informationsmanagements darstellt, fehlt oder ist falsch festgelegt. Ich habe den Akzent auf den Fall gelegt, wenn das Format der Dateien von den Informationssystemen der Unternehmen nicht unterstützt ist. Im Jahre 2012 habe ich erforscht, wie sich die Informationsgrundlagen der Logistik und der Prozessabwicklung in Klein- und Mittelunternehmen abwickeln. Ich habe Schwierigkeiten in der Abwicklung gefunden und habe versucht Lösungen für ihre Beseitigung zu finden. Unsere Recherche wird in diesem Artikel zusammengefasst.*

#### **Rezumat**

*Administrarea logisticii și conducerii proceselor în manufacturarea companiilor sunt executate la fel ca și posibilitățile comune ale propriilor tehnologii de informare și comunicare precum și rata lor de aplicare sunt utilizate efectiv. În întreprinderile mici și mijlocii (IMM), nu există întotdeauna divizii sau specialiști responsabili care trebuie să conducă astfel de procese. Aceasta este cauza pentru care specificarea exactă a procesului de informare și comunicare care creează suportul managementul informațional absentează sau nu este incorect determinat. Am pus*

*în evidență cazul care se întâmplă des atunci când formatul datelor nu este sprijinit de către sistemele de informare ale întreprinderilor. În anul 2012, am cercetat modul în care suporturile informaționale ale logisticii și a derulării proceselor sunt derulate în întreprinderile mici și mijlocii. Am încercat să găsim anumite dificultăți precum și cauze datorate cooperării dintre întreprinderile de manufacturare în mediul internațional pentru a le efectua mai bine. Am rezumat cercetarea noastră în acest articol.*

**Key words:** *international environment, multicultural cross-cultural competences, logistics and carriage processes*

**Schlüsselwörter:** *internationales Medium, multikulturelle/ interkulturelle Kompetenzen, Logistik- und Verwaltungsprozesse*

**Cuvinte cheie:** *mediu internațional, competențe multiculturale inter-culturale, procese de logistică și administrare*

## **1. Introduction**

Effectively managed enterprise processes strongly depend on current and available information support. By its creation all the information requirements must be set strictly; they are supposed to reflect a real situation, support assignment and transfer of several changes in and out of the enterprise. It is more important particularly when business partners in the Slovak republic as well as in abroad were cooperating. For effectively hyper-connected enterprises it means to achieve reduction of time to make decisions according to clients' demands. Generally, in the manufacturing enterprises it means to have right information to manage its production, logistic and carriage processes after purchasers' demands. To increase the rate of customers' satisfaction as well as production efficiency it is needed to manage all processes immediately and promptly.

Managing of logistic or carriage processes in the small and medium enterprises is difficult because of the fact that there usually do not exist divisions or responsible specialists who have to manage these processes. It causes that exact specification of information and communication processes are used to create information management support that is always inaccurately determined. However enterprise managers have to make claimed decisions in expected reaction time in according to changes of purchasers' as well as their own clients' needs. Using of information and communication technologies as a support of information systems both cooperating enterprises make more possibilities to be successful due to having right information that are useful in communication with their partners and in consequence of this they can more exactly manage their own production and logistics processes as well as cross-freight transport of goods.

## **2. Impact of information revolution**

A basic problem of current period is impact of information revolution - its consequences in companies are seen in a form of information strategy aiming on permanent innovation and purchase of latest technologies to achieve the highest quality and the most modern technologies focused on getting a very quick and fast access to necessary information. This trend in companies caused that they often purchased technologies that are enable different functions and functionalities of information systems but were only rarely used in companies for support running processes and activities.

Secondly, there were the trends allowing support of managing and decision making activities through information systems applied by them, but their innovation were very expansively and the supports were applied quite seldom by companies. A permanent requirement towards users to adapt to new technologies, functionalities and surroundings seemed to be a problem.

Consequently, the next problematic point is heterogeneity of information systems platforms due to various IT platforms and data formats which formed a base of purchased solutions of

information systems. This is the reason why the investment was perceived as ineffectively expanded on. Problems escalate by cooperation in the international environment by foreign activities where such barriers as language barriers or cross-cultural habits as well as the frequently occurred changes of legislative terms and rules were added. They involve obstacles which complain co-operation between purchasers and suppliers as well as freighters (in the case of transport of products from supplier to purchasers or their own clients). In our researching activities we pay attention on detecting where the problem of both enterprises' cooperation is. We consider the problem not to be caused only by different technological possibilities of enterprises' information systems but it depends also on the management self access both cooperated enterprises. We researched in small and medium enterprises what kind of barriers causes these affects; especially we focused our attention on analyzing the highest impact of these barriers.

### **3. Some specific aspects of logistic and carriage processes**

Managing of logistic and carriage processes is more specific due to all related activities and processes which are managed by all corporate departments. As more effectively all processes are managed, the higher quality of flow of goods and services is obtained.

Matter of this is to overcome time and place in compliance with the following seven rights (7Rs), that are, the ability to deliver the right product to the right customer at the right place, in the right condition and right quantity at the right time, at the right (lowest possible) costs.

To do such processes more effectively, enterprises should use many various technologies, for example

- Just in Time (JIT),
- Hub and Spoke (H&S),
- from door to door,
- combined transport,
- Kanban technology,
- Quick Response (QR)
- Efficient Consumer Response (ECR).

If management decides to use „Just in Time" technology (JIT), it should be observed following conditions:

- firstly, not only desired accuracy, but the quality of its delivery must be guaranteed too, if suppliers want to adapt to purchasers needs, they have to dispose of available information exploited to planning and operative managing of all related processes,
- if management of carriage processes will be performed reliably and accurately, many adequate distribution processes should be realized by:
  - own freight in the case of regular transport performance,
  - using the services of certified carriers or another freight forwarding companies,
  - using services of forwarding companies that otherwise are not usually used, for example in the case of irregular transport performance, it means, necessary carriage can be executed by other (by air, railway, water transport, etc.) than well established practices.

Managers make their own decisions based on:

- optimally updated data which inform about the required number and range of goods by purchasers, than they can be compared with actual stock in the supplier company and immediately they are used in processes of validation of customer demand,
- support from the management of logistics processes should allow immediate planning and management of manufacturing processes so the desired amount of product can be produced on time and prepared for expedition,

To be all transport operations carried out effectively, it is necessary to plan the carriage performance in order to achieve maximal using of vehicles capacity as well as any other transport means, whether towards the customer, and if it is possible backwards. If an enterprise wants to manage all related processes optimally it is needed to exploit available resources the most

effectively and to achieve adequate performance of logistic elements as well as its own manufacturing processes. Measure of their successfully application relates to the quality with which the flow of goods and services are realised. As successfully have been implemented all processes it can be evaluated according to the level of customer satisfaction. This is especially actually when the quality of all related processes is strictly controlled, for example by foreign cooperation.

Logistics in the transport sector is very important. It confirm the views of experts who claim that “in a market economy with strong competition will not be successful any business entity that fails in satisfying the customer requirements based on all the above mentioned conditions of carriage, and in addition the transport of goods should be done right ecologically, it means that it should use environmentally friendly modes of transport (Královenský, Gnap, 2010). Such carriage have to be realized in the long distances through combined transport modes, only transport of goods to end-users would be realized by using freight transport which should use new technologies and eco-fuel as an alternative source.

As we can note Majerčák (2000) extends the definition of logistics through socio-economic aspect related to an effort “to satisfy a loyal customer by optimal cost that will not be necessarily the lowest, if the customer is willing to pay for them.” But in such cases management have to solve problem, whether the costs are invested optimally or not. Finding the right solution where costs are mutually acceptable by both partners strongly depends on having the necessary information about customer`s needs.

Companies should have different information. The more exact and actual information are, the better reflect to their needs. Effective functioning of information chain can be expected if booth (purchasers, suppliers and their clients) cooperate together in the exchange of necessary documents, in which this information should be available in a suitable format and time.

It means the effective functioning of the information chain can be expected if all participants cooperate at the processes of exchange of necessary documents where the efficiency of data processing strongly depends on the appropriate format and immediate access of data accessing to them by bidirectional data flows. Such information is suitable to plan, monitor and operational managing of logistics and related carriage processes. Such cooperation may be threatened because of many reasons. We researched what are the most serious problems in the business practice of small and medium enterprises.

#### **4. The research results in preparing documents for managing of the logistics and carriage processes**

Based on theoretical knowledge, we researched (in the business practice of SME, 2012) how they manage their logistics processes by using “JIT” technology which is designed to achieve reduction in inventory and storage of goods at a functioning transport. When they want to maintain or strengthen its competitiveness they have to manage the processes associated with logistics as well as transport of goods so it is achieved most effectively meet the demand for the supplied products by the customers according to their immediate needs, deliver them "just in time", in the exactly agreed amount and in specified date. Although immediate future needs of customers can be estimated, but even so, the ordered quantity of products may vary and therefore it is necessary to adapt them to access and immediate availability of the supply business. Ensure the required capacity depends on the possibilities of the supplier, which could be currently unavailable due to a lack of manufacturing lines or unexpected delays in the supply chain field.

As we alleged above companies should have exact and actual information about all managed processes. Firstly we analyzed their preferences for using electronic communication tools by online communication. Users always use many various tools or combination of them. We found the mostly preferred tools to realize online communication are the direct telephone contact (in 80 % of cases), next online communication as well as written by SKYPE (in 62 % of cases), then SMS notification (in 35 % of cases) or e-mail communication.

Next we find out what kind of barriers is frequently occurred by such forms of communication. The most common barrier is the language barrier, which causes the

misunderstandings in telephone contact or written (in the form of an electronic online communications, where such barrier in 32 % of examined cases was appeared). Next barrier is due to lack of multicultural competencies or insufficient knowledge and understandings of foreign customs and habits (in 53 % of cases). These barriers limit the wider using electronic ways of communication.

All enterprises, especially small and medium-sized, significantly affect some changes, threats or other barriers. Therefore they usually required exact list of acceptance of mutual business relationships. These documents make both business partners keep to the agreed conditions. This situation is worsens particularly in international forms of cooperation, even if it comes to the often long working relationship, not mention the new relationship, or if frequently absent orders or other forms of acceptance of cooperation.

Therefore we researched what the problem of prolonging of data processing of exchanged documents it is. As we can conclude from the analysis of research results most frequently occurring problem are incompatible document formats (in 92% of observed cases) that inform the contractor about the quantity of goods, requested by client. Such information informs about the quantity of products, as well as confirms their acceptance received by individual suppliers. Mostly they are in a format that is not supported by information technologies used by its processing. Therefore their processing is less effective, laborious and more time-consuming. It does not allow immediate and quick processing by electronic tools; it still depends on manual processing by a responsible person, what leads to prolong data processing. When a few processed documents are there or other work activities allow their manual processing in the permitted time, occurred delay is acceptable. However, increasing of number of documents may leads to prolonging their processing time or increasing complexity of processing, such situation is no longer acceptable and it causes many difficulties in the enterprise.

Further we research what causes the inability to sending or processing necessary documents in the appropriate formats or what is the problem of inability to its conversion to a format acceptable by information systems of suppliers. We found the common barrier that keep down the possibility of wider use of available tools and resources supported by enterprise information and communication technology is the low level of users' computer skills and abilities by using them to support their activities (denoted by 42% representatives of SME). They mostly do not use information and communication technologies (in the case of small enterprises).

In cases in which we eliminated incompatibility of formats as a result of users' computer illiteracy or their ignorance to working with IT, we found that despite these suppliers strictly specified requirements relating to needed formats of documents towards foreign customer information systems the conversion are still impossible. Such terms are necessary to do the confirmation of available goods that can be produced on related time and prepared for expedition according to customers' demands more exactly. Process of setting the required output is as much accurately as are formats of sent documents much more suitable for conversion (for example not a document in a fax form, but as an exported electronic spreadsheet of MS Excel or another export format supported by both IS).

We pointed that unavailable formats occur not due to a customer's IS inability to issue documents in required formats, but due to their unwillingness to change the established way of communication and data exchange. This averseness to change documents format into supported format may be a result of making a little account to the importance of such requirement by purchasers. Foreign partners are not willing to change established ways of communication due to their conveniences or mannerism to communicate by another than mostly used ways or used tools. Their mistrust of reliability to use other than the usual means of communication, could result from awareness of distortion or falsification of the ordered quantity, which may be associated with their increasing costs of their activities or of the concerns of non-delivery dates required by their customers.

## 5. Some possibilities how do international cooperation more effectively

We recommend following references:

- Involve management of both cooperating parts to solve all problems, particularly by cooperation in the international environment, where the mutual knowledge and understanding leads to creating a precondition for their willingness to cooperate and quickly solve problems encountered anywhere.
- To decide whether it is necessary to invest into the purchasing of a conversion program, which will convert those incompatible document formats, but due to its special purpose management have to decide if such additional investment are not necessary or too expensive.
- To raise electronic signature or advanced electronic signature, where the barrier is the level of their acceptance or credibility just at the international level of communication.
- To look for appropriate solutions which would be the result of the visibility requirements and demands of users that are not taken into account due to their position in the enterprise or in the production and logistics chain is unimportant or is not enough significant to influences management decisions of both firms. It is most significant in the case when the acceptance or non-acceptance of their demands have a significant impact on the success rate of the entire logistics chain.

## Conclusion

To sum up, management of logistics and transport processes is still threatened, whether on the domestic or international level of cooperation, it is due to frequently occurring lack of low level of computer skills and abilities of users to exploit all available possibilities of tools and means supported by information and communication technologies as part of their information systems.

Mostly occurred barrier is the language barrier which can initiate misunderstandings, particularly by direct form as well as online form of electronic communication (telephone or written by SKYPE, e-mail, etc.).

Due to requiring of the exact documents of mutual business relationships, it is more important to verify electronic communication by documents in a written form. Their verification by electronic signature or by qualified electronic signature has their future and basic condition is their acceptance by foreign communication.

Exchange of desired data by electronic way of communication is a possible solution. Transmission efficiency of that data strongly depended on the level of compatibility of data and communication flows as ways to exchange necessary information; it is from the perspective of the experts of IT technology to the trivial solution. Just this solution is often a major problem. Such significant sources of current information used as management support of manufacturing, logistics and transport processes, is not available as quickly as it could be possible. This problem cannot be solved by competent responsible experts; the solution does not depend on their knowledge and skills in the using of available information and communication technologies, but is subject to make decision by the management, it means senior management must be willing to solve this problem.

## Literature

[1] KRÁLOVENSKÝ, J., GNAP, J. Postavenie dopravy a zasielateľstva v logistickom systéme. [online]. 2010. [cit. 06. 03. 2012]. Available on internet: <http://www.zlz.sk/sk/informacie-o-zvaeze/o-je-logistika.html>

[2] MAJERČÁK, J. 2000. Supply chain v oblasti distribučnej logistiky s využitím nástrojov štruktúrálnej analýzy. In *LOGVD 2000 – logistika vo vojenskej doprave*, 13. vedecko-odborná konferencia v Žiline, 26.10.2000. Available on internet: [http://www.logistickymonitor.sk/en/images/prispevky/logvd2000.pdf&ei=rEWY TZ\\_xIcPMswatkpS1CA&usg=AFQjCNFfz476HCx5xZbygNRRt0aJwqFXlQ](http://www.logistickymonitor.sk/en/images/prispevky/logvd2000.pdf&ei=rEWY TZ_xIcPMswatkpS1CA&usg=AFQjCNFfz476HCx5xZbygNRRt0aJwqFXlQ).

[3] MORAVČÍK, T. Zasielateľstvo a jeho vzťah k logistike. In Logistický monitor. Internetové noviny pre rozvoj logistiky na Slovensku. [online]. 2010, vol. 3, no. 3 [cit. 2003-01-10]. Available on internet: <<http://www.logistickymonitor.sk/en/images/prispevky/zasielatelstvo.doc&ei=tAStTuK0NZCq8QOVhrWOCw&usg=AFQjCNE-ICovUvOgod8xolCY1xkHdVOA8Q>>.

[3] Nové súvislosti dopravnej politiky v Európe. 2006. [online]. 6/2006. [cit. 10. 10. 2010]. Available on internet: <<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52006DC0314:SK:NOT>>.

[4] Plán jednotného európskeho dopravného priestoru – Vytvorenie konkurencieschopného dopravnému systému efektívne využívajúceho zdroje. KOM(2011) 144. 2011 [online]. 3/2011. [cit. 31.3.2012]. Available on internet: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0144:SK:PDF>

[5] POMFFYOVÁ, M. 2005. Pozitíva a negatíva multikultúrneho prostredia a ich vplyv na rozvoj edukačného procesu. Essentia, Plzeň.

[6] PŠENÁK, J. Prepojenie manažmentu a IT. s.48-49. Bratislava. Infoware. Č. 7-8, 2007. ISSN 1336-3581

