UDC 658

THE DEVELOPMENT OF INFORMATIONAL FLOWS IN THE LOGISTICS SYSTEM
OF THE RUE «BELTAMOZHSERVICE»

KATE KAZACHONOK, POLINA LAPKOVSKAYA
Belarusian National Technical University, Minsk

The RUE «Beltamozhservice» is the largest operator in the market of logistics services in Belarus. The article analyzes the types of information flows used at this enterprise, proposes the introduction of a unified information network to improve the operation of the logistics service enterprise as a whole and proves the feasibility of this introduction.

A logistics information system (LIS) is a system of records and reports – whether paper-based or electronic – used to aggregate, analyze, validateand display data (from all levels of the logistics system) that can be used to make logistics decisions and manage the supply chain.

Informational flows associated with the organization of production and distribution of goods can be divided into flows of individual enterprises (micro level) and flows of the interorganizational, regional and interstate level (macro level).

The creation of a unified information network (UIN) is pursued by the following goal: to automate the transfer and processing of information in an enterprise's logistic information system, which will make the enterprise more competitive [1].

The creation of UIN involves the creation of:
– local area network (LAN);
– structuring cabling system (CS);
– telephone systems (TS) [2].

The following three levels can be distinguished in the Unified Information System.

The first level - this is the level of the workplace, for example, jobs in the departments of logistics, declaration, forwarding, the customs department. At this level, certain operations are carried out with controlled information flows and document flow.

The second level - this is the level of the production site, warehouse, etc., where the processes of processing, marking, packaging, bar-coding in the WMS system and transportation of cargo units take place.

The third level is the system of transportation and movement of cargo units as a whole from loading onto the vehicle to arriving at the designated place [3].

At RUE «Beltamozhservice» information flow exists in the form of paper and electronic documents (media). As a software logistics process is used by 1C: Accounting, ACCESS, Microsoft Excel, and proprietary software used in the technical Department. This software does not allow to effectively automate the management of all technological processes of the modern warehouse complex.This is due to the following shortcomings in the organization of information support of logistics:
– errors;
– not full availability of all required information;
– no timeliness;
– the inability to store information in electronic form, for its subsequent operational transfer.

Thus, we can draw the following conclusions about the state of the information logistics system of the RUE «Beltamozhservice»:
1) the system contains closed zones (especially in transport logistics);
2) there is no strict hierarchy, control levels are blurred;
3) functions of external relations has not been given a specific level of the hierarchy;
4) the software product used in the enterprise to ensure logistics processes does not allow to effectively automate trade and warehouse operations.

Figure 1 shows the flow pattern of the main flows in the logistics system of the RUE Beltamozhservice.

In our case, the first level includes the departments of logistics, Declaration, freight forwarding Department, accounting and control Department, financial management. The second level includes a temporary storage warehouse and a customs warehouse. And the third level, respectively, includes: carrier, place of delivery and place of loading at the customer.
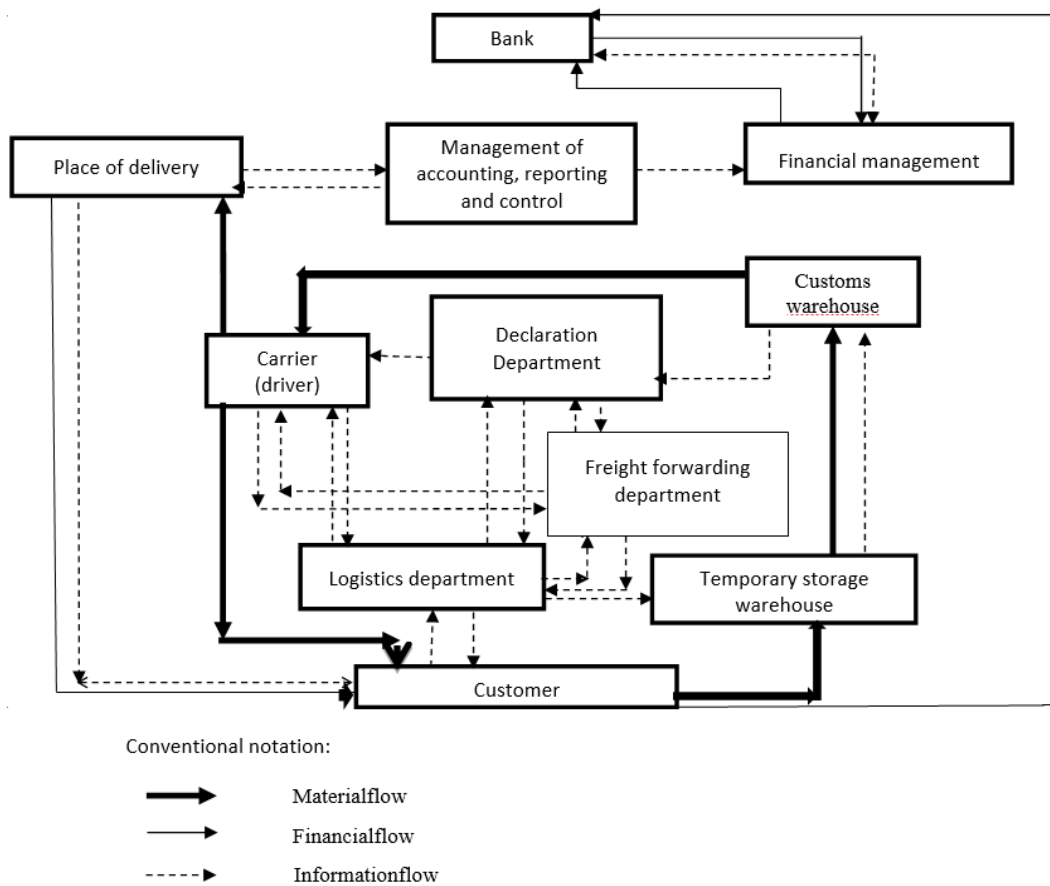
Figure 1. – Scheme of movement of the main flows of the logistics system of the RUE «Beltamozhservice»

With the introduction of EIS at the first level between the departments of logistics, Declaration, as well as freight forwarding Department permanent and quick access to incoming information to the enterprise will be organized. Table 1 shows the average time spent on a single freight order processed by a single worker.

Table 1. – Average time spent on one freight order

Average time of consideration of the customer's order in the logistics Department, hours	Average time of preparation of relevant documents in the Declaration Department, hours	Average time of organization of transportation by freight forwarding Department, hours	The average time of document transfer between departments, watch	Total time spent on order, hours
0,5	0,75	1,5	0,25	3

Based on the data table, one order takes three hours. Working time is 8 hours. That is, during the working day the employee can accept and place three orders, and prepare documents for two orders. If you take the number of working days in a year equal to 252, the employee in one workplace takes 673 freight orders a year.

Based on data from table 2.2 in 2017 the RUE «Beltamozhservice» in Minsk implemented 7757 transportations.

With the introduction of UIN, the time for ordering is reduced by 1.08 hours. Consequently, the acceptance and processing of orders will be done in 1.92 hours. During 8 working hours the employee can process and complete 4 orders instead of 2.67 with the old system. This will allow to process 11 thousand 88 orders a year. Thus, the number of transportations produced will increase by 43 percent, with regular receipt of orders.

Based on these data, it can be argued that the introduction of a single information system in the logistics service enterprises is appropriate.

Internal production unified information system will ensure the adoption of sound management decisions. It will be structured to provide relevant information on each of the sections of the RUE «Beltamozhservice». Manual and automatic collection of data generated during transportation and preparation of documents will be carried out quickly and with a high degree of reliability [4]. The creation of UIN will allow the company to reduce the time of document circulation, facilitate communication with suppliers and consumers, make the processing of information by employees more efficient, and accordingly increase sales revenue and profit of the RUE «Beltamozhservice» [5].

REFERENCES

1. Левкин, Г.Г. Основы логистики. [Электронный ресурс] / Г.Г. Левкин. – Режим доступа: https://econ.wikireading.ru/4754.– Дата доступа: 20.02.2019.
2. Сергеев, В.И. Корпоративная логистика. 300 ответов на вопросы профессионалов / В.И. Сергеев. — М. : ИНФРА-М., 2005. – 976 с.
3. Алесинская, Т.В. Основы логистики. Функциональные области логистического управления / Т.В. Алесинская. – Таганрог : Изд-во ТТИ ЮФУ, 2010. – Ч. 3. – 116 с.
4. Тяпухин, А.П. Проектирование товаропроводящих систем на основе логистики. – М. : Финансы и статистика, 2007.– 240 с.
5. Смагина, М.Н. Процессы системы менеджмента качества / М.Н. Смагина ; под науч. ред. д-ра экон. наук, проф. Б.И. Герасимова. – Тамбов : Изд-во Тамб. гос. техн. ун-та, 2006. – 100 с.