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THE DEVELOPMENT OF LOGISTICS ACTIVITIES OF FREIGHT-FORWARDING COMPANY

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The article deals with the issues of logistic approach to the organization of the freight-forwarding company, in particular the reorientation of the company as a logistic level 2PL provider to technology providing 3PL level services. The results of the calculation of the economic benefits of implementing 3PL technology as an example of a particular company are given.

The main directions of use of logistics in the activities of freight-forwarding companies in Belarus and abroad are an extension of the number of types of services provided and ensuring quality freight-forwarding service that is clearly seen when considering the dynamics of the development of the operators of logistics services. 2PL logistics operators provide traditional services for transport and warehouse management. 3PL – Third-Party Logistics, involves the provision of logistics services beyond the standard list, including warehousing, transshipment, handling of goods, additional services with significant added value and the use of subcontractors [1].

Logistic services in Belarus are far worse than world logistics. There were 3 million companies in the Republic of Belarus in 2016, and only about 20 of them have 3-PL service provider. Logistic services market is 99.5% formed by 2-PL providers, and the market of 3PL-service is less than 0.5%. At the same time 3PL-providers that are up to the world standards are poorly represented on Belarusian market. Thus, 3 PL-providers deficit is viewed in Belarus [2].

According to the world practice, 3PL-providers functions include:

- 1) transportation (organizing, carrying out and controlling the delivery of goods);
- 2) storage (warehousing organization, the operator carries out identification, sorting, labeling, and information support of the storage process);
- 3) planning (preliminary and operational planning of complex measures, as well as the optimization of the process as a whole);
- 4) documentary support.

Basis of every logistics system is the organizational structure and functional logistics support. A special role is played by information support of 3PL-operator, which brings together the information space of the central office, warehouse management system and automatic delivery of electronic documents [3].

Consider the capacity and effectiveness of the transition to the status of 3PL – provider on the example of "Krafttrans". "Krafttrans" on the International Classification of companies providing transport and logistics services is a 2-PL operator with the prerequisites to become a 3-PL operator. Based on the analysis of industrial and economic activity of the company, it can be concluded that it is functioning quite successfully, it has a strong financial performance, a good material and technical base. "Krafttrans" is consistently profitable and cost-effective operating company, which has the positive dynamics of development – revenue growth.

The company is proposed to expand the number of services provided to its customers for the further growth. This will provide the highest quality service to customers and attract new customers, as the market of 3-PL services is a new market for the company.

To go into the category of 3PL-provider company should focus on the most profitable function that is required to the customer, and for the remaining tasks it should work closely with other operators who provide the required service to the client by "chain".

The total number of customers and the number of main customers in the transport orders are presented in table 1. The results of consumer segmentation in the number of orders are presented in table 2. Potential services that can be provided by some key customers relating to the high-priority segment A1 are described in table 3.

Table 1 – Number of customers

Year	Total customer	The number of main customers (more than 80 orders)
2013	460	96
2014	480	99
2015	528	102

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Table 2 – Segments of customers on the number of orders and marginal income

Segments income	Segments on the number of orders		
	Key	Perspective	Others
High	A1	B1	C1
Average	A2	B2	C2
Low	A3	B3	C3

Table 3 – Potential services key customers

Customers	Type of product	Potential needs in 3-PL services
Customer 1	Building materials	Consolidation of the central warehouse in Moscow, delivery to regional warehouses and shops, cross-docking, sorting, labeling, stickering, attachment of annotations and instructions in Russian, preparation of goods for advertising and marketing actions.
Customer2	Food products	Posting excise stickering, preparation goods for advertising and marketing actions.
Customer3	Accessories for light-transparent structures	Warehouse in Moscow, sorting, labeling; product packaging custom size; shrink wrapping machines; stickering.
Customer4	Household products	Find manufacturers and suppliers, consolidation and storage of goods in a warehouse in Europe, stickering, preparing a complete set of documentation for customs procedures, repackaging.
Customer5	Food products	Accounting for the shelf life of products, increased demands on the sanitary condition of the warehouse. For animal products - a statement of veterinary certificates. For certain groups of goods - maintenance of temperature and commercial neighborhood. Organization of veterinary station on the territory of the warehouse.
Customer6	Gardening equipment, home and garden products	Non-standard packaging. Presale preparation, warranty cards investments. Working with the return of goods.
Customer7	Household appliances and electronics	Different types of product placement in the warehouse: racking, close-meshed. It is possible to select storage area of goods in the warehouse with video surveillance for the orders assembly process to minimize losses from theft. When accepting the goods a special stickering is carried out. It's necessary to put in warranty cards, create sets for promotions for delivery to retailers. There is a need to work with serial numbers to ensure the return of goods under warranty and scrapped.

Based on the analysis of potential customers requirements select services that a group of "Krafttrans" companies will presumably have as a 3PL-operator:

- 1) Warehousing:
 - central warehouse with the WMS system of regional consolidation warehouses;
 - consolidation, storage and cargo handling at intermediate European warehouses;
 - sorting of goods, labeling and excise control marks, sticker parcels, weighing, measuring, packaging, quality control;
 - formation and packaging of similar range of products in the kits;
 - processing of production and sets of production for promotional offers;
 - prototyping of labels and texts, label printing;
 - putting in annotations and instructions;
 - repackaging of goods;
 - organization of the piece of processing;
 - cross-docking;
- 2) Inventory management:
 - accounting of stored goods with the warehouse management system WMS: order management, control batches, serial numbers, expiration dates, the full traceability of transactions;
- 3) Transportation and forwarding services:
 - providing services on-line monitoring of the movement of rolling stock through the site of company;
 - development of optimal route of delivery, cost calculation and timing of the arrival of goods at destination.
 - "door to door" cargo traffic;
 - preparation of transport documents.
- 4) Customs services:
 - customs clearance, veterinary documents, including:

- electronic preliminary information (EPI);
- statistical declaration;
- registration certificates C-1, C-2.
- declaration of goods and products of any complexity, the application of customs procedures;
- consulting on customs law and foreign trade, the optimal choice of the customs procedure.

The set of measures to improve the organization of logistical activities and the costs associated with the company's transition to a 3PL-technology.

3 PL-operator is characterized by the following areas:

- infrastructure,
- information structure,
- organizational structure.

It is necessary to analyze the potential load of warehouses with the purpose to bring the infrastructure in accordance with customer needs. The group of companies "Krafttrans" currently has the opportunity to put in store in their own storage warehouse in Vilnius, located in the most sought after transit direction of transportation to / from EU countries to / from Russia, Ukraine, Belarus. This warehouse belongs to related companies "KrafttransVernalis". Also, the group of companies has the opportunity to use the services of consolidation warehouses in the Netherlands, Germany, Belgium and Poland. The seat of the central warehouse is advisable to choose Moscow as needed consolidation warehouses in Europe.

Analysis of the load of domestic warehouses showed that the construction of our own warehouses in the transition program of implementation to service at 3PL-provider level is inappropriate. Warehouses need to rent and to ensure compliance the required operations in a rented warehouse.

The estimated total area of a leased warehouse is 1,000 m². Costs for the purchase of warehouse equipment are 17956,94 rubles. Depreciation is 1795.69 rubles per year. Annual depreciation is calculated by straight-line method (standard service life of machinery and equipment - 10 years). Total costs for the purchase of equipment and construction of a warehouse amount to 66721.3 rubles.

Obligatory attribute of 3PL provider is the availability of logistics services. Figure 1 is a schematic diagram of the organization of the logistics enterprise "Krafttrans".

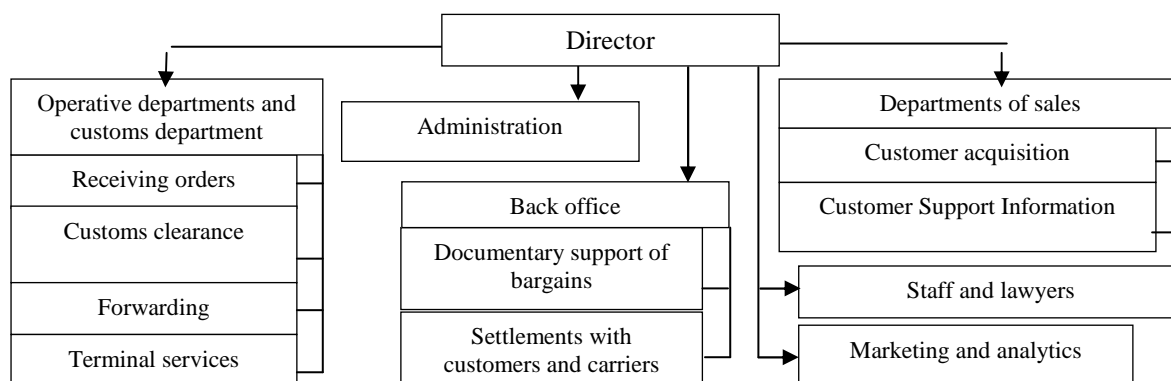


Fig. 1. Scheme of logistics in the company

Creating of a logistics department is very necessary for the company. It is advisable to include the department of five people: deputy director for logistics, financial manager, information technology manager, manager of customs and transport operations, manager of warehouse operations and inventory management. It requires the development of staffing schedule of the department and duties of its employees. The development cost of the logistics department include the resettlement costs of workplace and equal 3410.5 rubles.

A necessary condition for coordinated work of all parts of the supply chain is the availability of information systems that are able to tie together all the activities (transport, warehousing, distribution, etc.) and manage it.

Currently, corporate information system Terrasoft belonging to the class of Customer Relationship Management is used in the group of companies "Krafttrans". However, the transition to the new customer service technology may require the introduction of new solutions. Replacement of the existing system to ERP + WMS-system, which meets the increased requirements of the organization of information flows in the logistics system. The costs of implementing the new system are 55364.8 rubles.

Calculation of the economic efficiency of the proposed events

To assess the effectiveness of the transition to 3-PL it should be evaluated:

- investment required for the transition to 3-PL operator,

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- customer needs for 3-PL operator service,
- costs associated with the transition to 3-PL operator,
- financial benefit from the event.

Investments in fixed capital include costs for new construction, expansion, reconstruction and modernization of existing enterprises, the acquisition of equipment, tools and equipment and other expenses of a capital nature. Investments in fixed assets including VAT = 150595.9 rubles. Investments in working capital are investments in the increase in inventories and a decrease in debts to suppliers. Revenue during the period of the investment will amount to 98557.8 rubles, and expenses – 8373,9 rubles. The sources of financing of the investment costs are own funds – 55000 rubles, and borrowed funds – 9559,9 rubles. Since the project is integrated into the operating enterprise, the discount rate is determined on the weighted average cost of capital.

$$WACC = r_b \cdot w_b + r_d \cdot w_d \cdot (1 - T),$$

where w_e – share of equity; $w_e = 0,365$;

w_d – share of debt capital; $w_d = 0,635$;

$r_d = 9,6\%$;

$T = 18\%$ – income tax rate.

$$WACC = 0,21296 \cdot 0,365 + 0,096 \cdot 0,635 \cdot (1 - 0,18) = 12,77\% .$$

The cash flows from the project assets (flows of investment in fixed and working capital) are determined for integrated projects. The estimated cash flow of the project's assets on transition to 3-PL service provider will be 15328,860 mln rubles. Net Present Value of the project is given at a rate of WACC value of net cash flow NCF.

$$NPV = \sum_{t=0}^n \frac{NCF_t}{(1+r)^t},$$

where r – discount rate;

t – period of time;

n – period of project activities.

NPV of the project will amount to 1945730 rubles. The project can be taken to implement, because NPV of the project is greater than zero. Expected return period of investments is two years. Internal rate of return IRR is found using IRR function MSExcel and it will be 134%. This indicates a high stock of the project strength.

The above calculations show the feasibility of the proposed variant of the company's development.

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