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METHODOLOGY OF LOGISTIC SERVICES DEVELOPMENT

Abstract. The development of a logistics system should include: planning, preparing, validating, controlling the service specification, service delivery specification, and quality control specification; accurately defining the logistics service delivery process; validating that the service delivery process, once implemented, meets the requirements of the customer's order; updating the service specification, service delivery specification, and quality control specification in response to feedback data and other external situations where necessary.

Keywords: service, specification, logistics, quality, system.

Аннотация. Разработка логистической системы должна включать: планирование, подготовку, придание законной силы, контроль над спецификацией обслуживания, спецификации предоставления обслуживания и спецификации контроля над качеством; точное определение процесса предоставления логистического обслуживания; придание законной силы тому, что процесс предоставления обслуживания, после его реализации отвечает требованиям заказа потребителя; актуализацию спецификации обслуживания, спецификации предоставления обслуживания и спецификации контроля над качеством в ответ на данные обратной связи и другие внешние ситуации, когда это необходимо.

Ключевые слова: обслуживание, спецификация, логистика, качество, система.

Андатпа. Әзірлеу логистикалық жүйесін қамтуы тиіс: жоспарлауды, дайындауды, беру, заңды күшін, бақылау ерекшелікке қызмет көрсету, ерекшеліктер, қызмет көрсету және ерекшеліктер сапаны бақылау; дәл анықтама беру үдерісінің логистикалық қызмет көрсету; беру, заңды күшін, сол үдеріс-қызмет көрсету, содан кейін оны іске асыру талаптарына жауап тапсырысты тұтынушының; өзектендіруді спецификациясы қызмет көрсету, ерекшеліктер, қызмет көрсету және ерекшеліктер сапаны бақылау және жауап кері байланыс мәліметтері және басқа да сыртқы жағдайларға қажет.

Түйінді сөздер: техникалық қызмет көрсету, техникалық сипаттама, логистика, сапа, жүйе.

Logistic provider's obligations should be included in short brief description of chosen services right after the agreement was made. It defines the requirements and instructions for logistic department and is a base for logistic system development for consumers.

The process of developing such system includes the transition of its brief description into service specification, performance specification and quality control management reflecting company's ambition (i.e. target, policies and cost).

Service specification defines a service that should be provided, whereas performance specification - resources and methods used for organizing it. Quality management determines how the performance of logistic system should be evaluated and controlled.

Development of service specification, performance specification and quality control management are connected during the process of service mapping. Logistic workflow maps are a useful technique for displaying all activities and relationships between functional units. The principles of quality control management should be applied to the process of developing a logistics system.

The company's management should assign group of people accounted for logistics system development and to ensure awareness of all those involved of their responsibility for achieving the quality of service. Foreseeing the system flaws at development stage is cheaper than their adjustment during the later steps.

Development stage consists of: planning, preparation, compliance, control and quality management; exact definition of logistic service providing; meeting customer's requirements as end result; system agility.

While developing logistic services and quality control management it is important: to consider different demands for service; to analyze and anticipate the impact of possible systematic or random cancelations, as well as service termination requests which are out of supplier's control; to create a sustainable contingency plans.

Service specification must contain full and accurate definition of services provided, including: clear description of logistics services features to be assessed by the customer; acceptable standard for each feature.

Performance specification should include methods of providing the service including: clear description of what service is provided that can directly impact on system performance; standards for each provided services; requirements detailing the type and number of technical, technological and other equipment and resources needed to meet performance specification; number of employees required for logistics, knowledge, skills and abilities; confidence in service providers.

Performance specification must take into account company's objectives, policies and capabilities, as well as any safety requirements, environmental protection and other legal requirements. The development process can be divided to operational steps based on describing what is done exactly.

Examples of operational steps are:

- providing information about the service offered to customers;
- confirmation of the purchase order (delivery, etc.);
- provided services and their parameters definition;
- invoicing and payment receiving.

Detailed logistic flow charts can be helpful in such operations steps dividing the process .

The purpose, order and logic flow of operational steps can be varied according to the type of service provided by logistics. Acquired service can also be crucial to ensure the required level of quality, cost, efficiency and safety of logistics services. Received products should be given the same attention in planning, monitoring and checking, as well as internal activities. Logistics experts must establish a working relationship with the providers, including the receiving of feedback. For quality assurance continuous improvement of process and quick reaction should be in place.

Delivery requirements should include at a minimum:

- purchase orders with descriptions or specifications;
- choice of qualified providers;
- agreement on quality requirements and quality assurance;
- quality control methods;

– disputes settlement principles.

Main elements of logistics system will be marked and described below one by one. Management responsibility: logistic services policy; approval of logistics processes organization and structure; defining team and their responsibilities; aligning funds and resources; appointing senior management to ensure the required level of logistic service; evaluation of system efficiency.

Logistics services system. Organization and documentation should be established in order to ensure the required level of logistics system. This means the procedures must be recorded in printed form and shall be updated; defined requirements should be detailed in instructions: the operating instructions, instructions for product receiving, etc. It should also be ensured that all documented procedures and instructions are applied and followed.

Contract revision. It is necessary to establish and maintain procedures for contracts monitoring and revision both internally and externally. This, in particular, means: specification; demand and supply checking; assessing providers capability to meet expectations and achieve the target; cooperation with the customer. Contract revision and analyzing reports should be conducted on constant basis.

Logistics service planning management. This means in particular: planning of innovations in logistics; setting goals for innovation, thus should be quantitative data requirements: exploitation parameters, checking the results of innovation; the maintenance of the procedures for documenting, testing and approval of all changes to logistics services.

Data and documents control. Valid documentation should be provided on time, reviewed and accepted by the head of the logistics. It is necessary to ensure the availability of documentation in all areas, and the timely removal of outdated documentation at all stages of its usage. This means revising the documentation for logistics services (who designed, checked, approved, when to expire), usage approval; documentation should be distributed in a timely manner and identical in all versions; necessary documentation - in the right place; outdated documents removal; monitoring the changes.

Purchases. It is necessary to provide the required quality level of suppliers meaning: evaluating, selecting, and aligning providers; checking supply documentation in terms of clarity of products description and technical requirements; control of receiving purchased products.

Control of product delivery. All cases of product loss, damage or its unsuitability for use shall be recorded and communicated to the provider because it will require necessary checks, storage, as well as a message to the customer about the loss, damage and defects.

Identification and traceability of logistic service. We are talking about the possibility of delivering the service from the very beginning. To do this, you should: clearly defined and documented relevant logistics service during the production, storage and delivery of products; clear definition of products. This identification shall be unified and recorded accordingly.

Logistics services process management. To provide logistic services the following has to be considered: development, implementation and compliance with methodological instructions; preparation and use of production assets; process and equipment compliance; supervision and control of process parameters and characteristics; involvement of qualified logistics personnel; description of performance measurements in a clear and easy-to-form way; sustainability of the logistics processes.

Logistic services quality control. Service quality control should confirm that specified service requirements are met. It includes: the establishment of types of control; defining of the monitoring process; determining the type and level of control in the control cards; control maintenance; documentation of inspection results; assurance uncontrolled service is not provided.

Management of control equipment. In order to maintain it the following has to be considered: the definition of the necessary controls and its accuracy, as well as the selection of appropriate tools; documentation and maintenance of certain information about the type of

equipment, inventory number, the location, the frequency of inspections, criteria for authorization and the activities in case of unsatisfactory results; marking of all important control measurements to provide the required service level and control devices with the date of verification; ensure appropriate external conditions for inspection; compliance during transportation, storage and use.

Status of service quality control. The necessary notation, tags, labels, accompanying documentation, protocols. It is necessary to give a clear mandate to carry out control over the process of logistics services, bodies and persons responsible for providing the services meet the established requirements.

Inadequate logistics management service. Labels, documents and protocols are required. It is necessary to give clear authority of controlling the logistics service process, to the authorities and persons responsible for providing it and meet all the requirements.

Corrective and preventive actions. Reasons for poor service quality should be eliminated. Repetitive failures and deficiencies should be avoided. This includes in particular: drawing up methodological guidelines for identifying potential poor quality of service; changing the documentation according to confirmed corrective actions in order to prevent poor service quality in the future.

Handling, storage, packaging and delivery. At these stage the possibility of decreasing of service quality should be eliminated. Clear and specific instructions should be maintained while providing logistic service.

Logistic service quality data management. Data entries about service quality are needed as information and evidence of provided service. This requires: setting the type and size of data on the quality of service; creating clear guidelines on service quality evidence; registration and record keeping for quality; data management on the quality of suppliers; setting deadlines and archiving; data availability about service quality for logistics staff.

Internal audit. Only by systematic checks compliance of logistic system with standards, its agility and improvement can be proved. The following is required: regular reviews of logistic system efficiency; audit trainings for logistic staff; audit results sharing with team involved; corrective action plan to eliminate deviations; efficiency of corrective actions; internal audit results presentation in an appropriate form for analysis and evaluation of logistic system quality.

Training and development. Training needs for logistic team should be identified and resources to organize the development of team knowledge and skills have to be provided. You will need: clear procedure for identifying training needs; ensuring the appropriate level of qualification; systematic training activities (inside and outside the company); training records.

Customer service. Guideline and procedures will ensure to maintain agreed level of customer service and meet defined requirements.

Statistics. The proper use of statistical methods has to be defined by aligned procedures and guidelines. The procedure must describe the following: review and confirmation of statistical methods, especially those that are not standardized; relevance of the statistical method to the task (for example, by analyzing the logistic function or process parameters of logistic operations); planning, authorization and documentation of statistical methods; additional services; activities and offers of competitors; legal compliance; analysis and review of customer requirements, service data and contracts monitoring (should be available for logistic team); advising from functional departments to confirm their commitment and ability to meet the requirements; continuous follow up on customer changing requirements, new technology and competition; agility and use of quality management systems of logistic service.

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ЦИФРЛАНДЫРУДЫҢ ИНТЕЛЛЕКТУАЛДЫ ТЕМІРЖОЛ ИНФРАҚҰРЫЛЫМЫНА ӘСЕРІ

Аңдатпа. Бұл мақалада теміржол көлігінің интеллектуалды технологияларды қолдана отырып тасымалдау процессін жеңілдету көрсетілген. Орындалатын тасымалдарға байланысты ағындарды өткізетін көлік кеңістігінің құрылымы қарастырылады: ақпараттық, қаржылық, материалдық, сондай-ақ олардың өту кезеңділігі белгіленеді. Көлік құжаттары транзакцияларды үйлестірудің ақпараттық құрамдас бөлігі ретінде қарастырылады. Теміржол көлігінде интеллектуалды технологияларды қолдану ұсыныстар одан әрі ғылыми зерттеулерде қолданылуы мүмкін.

Түйін сөздер: инфрақұрылым, интеграция, экспоненциал, компьютерлік техника, навигация .

Аннотация. В данной статье показано упрощение перевозочного процесса железнодорожного транспорта с использованием интеллектуальных технологий. В зависимости от выполняемых перевозок предусматривается структура транспортного пространства, пропускающего потоки: информационные, финансовые, материальные, а также устанавливается периодичность их прохождения. Транспортные документы рассматриваются как информационная составляющая координации транзакций. Рекомендации по применению интеллектуальных технологий на железнодорожном транспорте могут быть использованы в дальнейших научных исследованиях.

Ключевые слова: инфраструктура, интеграция, экспоненциальность, компьютерная техника, навигация.

Abstract. This article shows the simplification of the transportation process of railway transport using intelligent technologies. Depending on the transportation carried out, the structure of the transport space that passes through the flows is provided: informational, financial, material, and also the frequency of their passage is established. Transport documents are considered as an informational component of transaction coordination. Recommendations on the use of intelligent technologies in railway transport can be used in further scientific research.

Keywords: infrastructure, integration, exponential, computer engineering, navigation.

Көліктің негізгі теріс салдарына адам шығынының жол берілмейтін деңгейі, қалпына келтірілмейтін энергия көздерін тұтынудың өсуі және қоршаған ортаға теріс әсер, көліктің барлық түрлерінде адамдар мен жүктің үнемі өсіп келе жатқан кідірісі жатады. Соңғысы көлік инфрақұрылымы қуатының объективті жетіспеушілігімен, сондай-ақ көлік ағындарын басқарудың жеткіліксіз деңгейімен байланысты. Әлемдік көлік қауымдастығы бұл проблемаларды шешу көлік жүйелерінің жаңа санатын құру түрінде