

## THE APPLICATION OF MODERN QUALITY MANAGEMENT TOOLS IN PARTICULAR COMPANIES

<sup>1</sup>Ekaterina CHYTILOVÁ, <sup>2</sup>Jaroslav HUBÁČEK

<sup>1</sup>*Moravian Business College Olomouc, Olomouc, Czech Republic, EU, [ekaterina.chytilova@mvso.cz](mailto:ekaterina.chytilova@mvso.cz)*

<sup>2</sup>*Technical University of Ostrava, Ostrava, Czech Republic, EU, [jaroslav.hubacek@vsb.cz](mailto:jaroslav.hubacek@vsb.cz)*

### Abstract

Quality is a complex of different parameters. Some of these parameters are subjective, others are objective. Both academics and entrepreneurs are of the opinion that the main parameters of quality are defined by the customer. The level of the quality of logistic processes is related to changing process requirements and the ability thereof to achieve certain goals. The levels and potential range of logistics services are defined in the article. The range of logistics services is constantly expanding. Modern logistics processes must be faster, more effective, less expensive, and more flexible. The article is focused on selected tools of quality management for logistics services providers. The tools of quality management are oriented to HR management in the case of logistics service providers. The tools most important for human resources (here in after referred to only as HR) usage are defined based on primary research. The companies serving as the object of our research are the logistics companies DHL Express CZ and HOPI Inc. Our primary data were collected using the method of unstructured interviews. The current requirements for staff and for employers are defined in the article, which describes the current situation of HR management in logistics companies. The main result of the article is the description of the application of HR management tools as a part of quality management in selected companies, as examples of good practice. The illustrative single case studies show us the usage of the main tools for the fulfilment of quality requirements as a part of the basics of HR management. The article describes how the requirements are transformed within the framework of HR management as a part of logistic services development.

**Keywords:** Logistics services provider, customer service, KPI (key performance indicators) measurement of fulfilment requirements, staff motivation

### 1. INTRODUCTION

Transporting and logistics companies employed 6.9 % of the economically active population in the Czech Republic in 2015, of which 74.1 % were men. One of the most important problems in HR management of logistics staff is how to keep the high-quality, well-trained labour force which has proven to be so useful [1]. Human capital also brings an emotional aspect to a company. A psychological contract is an emotional relationship between an employer and an employee and is a measure of organizational commitment to the company [1].

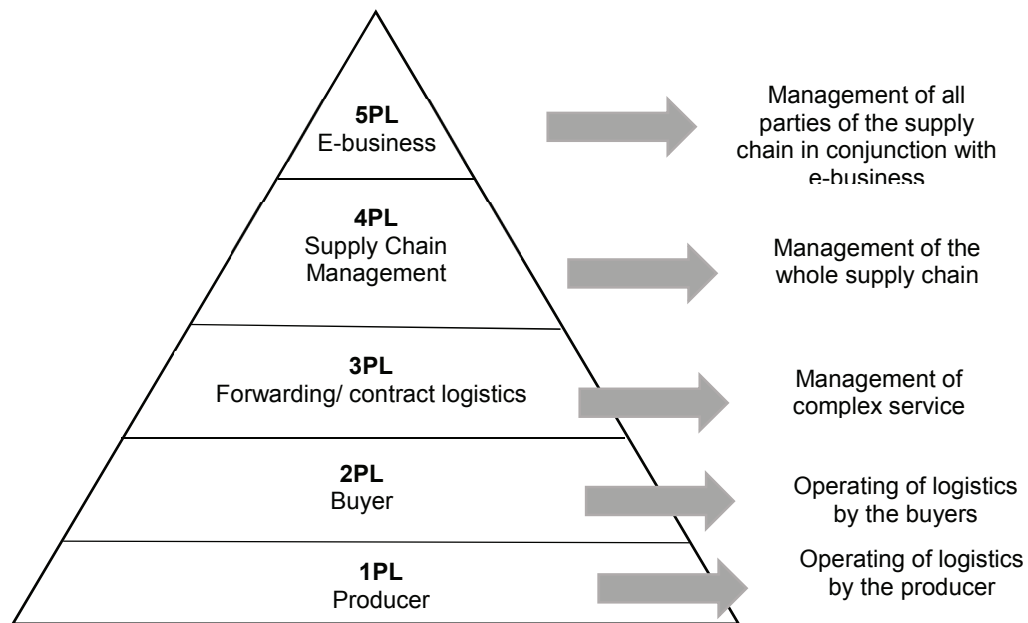
#### 1.1. Definition of the term, “Quality”

Quality management is an essential element in modern logistics. The concept of quality is subjective. However, there are certain basic parameters that determine the quality of a service, such as the ability to meet expectations and to work long and flawlessly, which, in the case of the quality of services means timeliness, accuracy and the fulfilment of customers' expectations. The key objective of total quality management (hereinafter referred to only as TQM) is to change the overall culture of the organization; to eliminate the view that errors are inevitable, and that putting out fires instead of preventing them are therefore part of everyday life, to create the feeling that everyone in the organization is committed to total and continuous improvement. [2].



## 1.2. The definition of levels in logistics services

Long-term relationships between service providers and clients have become more common and service providers have begun to set up special facilities for some of their clients. Such service providers are called third party logistics providers (further referred to only as 3PLs). This and other levels of logistics services are presented in **Figure 1**.



**Figure 1** The levels of logistics service providers [3]

In the context of logistics operations, environmentally-related output, referred to in this field as greening capability, consists of various logistics service bundles, e.g., freight forwarding and technology-enabled services (FTS), value-added logistics services (VAS), procurement and packaging related services (PPS), and planning and controlling services (PCS). [4]

## 2. METHODOLOGY

The main aim of article is the performance of the selected tools for HR management in the cases of two particular logistics services providers active in the Czech Republic. This main aim can be divided into the following sectional aims:

- The description of the current situation with the logistics staff of the given firms (based on secondary sources),
- The realization of illustrative single case studies of the usage of tools for staff motivation as well as effectiveness evaluation in the cases of the logistics services providers DHL Express CZ and Hopi Inc.

This paper is oriented to the performance of tools for quality management in practice. The case studies are focused on tools for education and the motivation of the logistics staff for the achievement of the high quality of services and the resulting commercial success. Data collection was primarily carried out with the help of non-structured interviews with the companies' representatives. The main research question was "How do logistics providers make use of modern trends in logistics staff HR management?"

This primary research has a qualitative character having been carried out by means of single studies. A case study is an inductive research method. It is usually accompanied by the analysis of qualitative data. [5,6]

Typical types of case studies include the so-called illustrative case study, the purpose of which is to illustrate (demonstrate) new, innovative practices applied in specific businesses. [5,6] The type of single illustrative case study we selected is in accordance with the article's aims.

### **3. THE EXPERIMENTAL PART**

#### **3.1. The description of the current situation with logistics staff**

##### **A suggested solution for the problem of the lack of quality of human resources management**

Entry-level logistical jobs are often less than attractive with their long hours, minimum-wage pay, and less than ideal work conditions, all of which are common. [7] Numerous companies fight with the lack of quality human resources and look for ways to cover this deficit. Companies often concentrate on human capital as a source of new possibilities and innovation. [1]. The mobile nature of the logistics process places limitations on the potential for automation. However, to the degree possible, automation can free employees from the more mundane, labour-intensive jobs and provide at least a partial solution to the problem. [7]. Many firms have successfully experimented with split shifts and unique working hour arrangements to accommodate the special needs of women who desire both to raise families and to hold formal positions in the work force. [7] Firms may be able to cross-train employees to perform different jobs to achieve improvements in productivity. By training employees to do multiple jobs, they can be assigned to facilitate the adoption of new processes. [7]

##### **Required logistic staff skills**

The dynamics of changes in Industry 4.0 forces entities involved in the integration of production, distribution, transport, storage and customer service processes to carry out the tasks entrusted to them in an effective, reliable, efficient and quick manner. Therefore, employed people must not only possess professional knowledge and specific skills, but above all, constantly learn. [8]. The current requirement of competitiveness is increasingly affecting the employment process. Entrepreneurs are looking for people with knowledge, skills and competence, allowing for effective operation in the world of economic competition. To have such employees available on the market, it is important to prepare them properly. It is important not only to teach them, but also let them learn from each other, which is particularly evident in the logistics industry. The European Logistics Association (ELA) recognizes competencies and validates logisticians' levels of experience at three (3) different levels: I. EJLog (European Junior Logistics) - Junior level (supervisory/operational management level); II. ESLog (European Senior Logistics) - Senior level (Senior management level); III. EMLog (European Master level logistics) - Master level (strategic management level). The Supervisory/Operational Level comprises two compulsory modules plus two further functional modules selected from a suite of five. [9]. The required competencies in the transport management module (optional) are as follows: the abilities to contribute to the evaluation of the transport environment, to fulfil transport performance objectives, to select an appropriate mode of transport, to manage transport scheduling operations, to plan primary transport (trucking) operations to meet objectives, etc. [9]

##### **Motivating logistics staff**

The modern trends of logistic staff motivation comprise investment in graduate trainee schemes, apprenticeships, and employee development programs in order to enable the company to "to grow its own" talent, as well as clear career progression plans and flexible benefits alongside an HR information system. [10]. The authors of this article [1] carried out their survey oriented to the detection of motivation factor preferences in the Czech Republic. The survey results have shown that the most important motivation factors for logistics staff in the Czech Republic are the atmosphere in the workplace, the supervisors' approach, good teamwork, job security, a fair basic salary and appraisal system in addition to other factors. [1]

### **3.2. The case study DHL Express CZ**

The main motto of DHL Express has always been "maximum customer focus", so the current 2020 Strategy, with the subtitle "Focus - Connect - Grow" is focused to customer satisfaction and the fulfilment of logistics requirements. The priority is the further improvement of the quality of all customer services, an increase in productivity using new technologies and the application of new approaches to the enhancement of employees' motivation.

#### **HR management tools for the fulfilment of quality standards**

##### **CIS (Certified International Specialist)**

The CIS program is an incentive motivation and training program, which received several awards. It enhances employees' knowledge and allows for their further development. Currently, more than 100,000 employees have been involved in the CIS program. The global management of DHL Express regularly devotes time to personal CIS lessons for employees at all levels around the world. One of the basic slogans of every CIS training session is the motto "As One", which is common across all departments with a clear goal - to provide service with the highest quality for customers, so that each shipment is delivered in a safe and timely manner. DHL Express has also established other values which it presents to its employees during training. When DHL trainers use the term, "Speed" they mean by this to work fast without sacrificing the level of quality. By "Can do" they mean a willingness to do the best for the client fulfilling customer requirements while always searching for the best possible solution in case there is any problem. By "right the first time" the knowledge of products and services and the ability to provide them at the highest-level quality on the first try is meant. By "passion" the trainers are referring to doing one's work with enthusiasm while creating closer relationships among colleagues and customers. Quality, perfect delivery and customer satisfaction are clear priorities for DHL Express.

##### **KPI**

Another key area supporting a strong customer focus is the evaluation and rewarding of employees. The wage is composed of a fixed and variable part. A part of the variable component wage are KPIs focused on the quality of service provided to customers. Each department monitors the KPI. For example, customer service monitors areas such as customer line availability, a quick and reasonable response time to customer requirements, content quality and the formal perspective on customer communication, the proactive approach to finding a solution in a problematic situation, etc.

##### **NPA (the Net Promoter Approach)**

DHL Express monitors the satisfaction of its customers on a regular basis. DHL employees are in continuous contact with their clients to evaluate customers' experience with DHL Express services. The NPA is based on an internal customer satisfaction survey. At least every three months, customers evaluate their own experience with DHL services on a scale of 0 to 10. This survey has shown that customers appreciate the friendly attitude of couriers, as well as their neatness or pleasant behaviour. The reliability, service and willingness of DHL's customer service providers have been positively evaluated. Based on the results of this survey, customer satisfaction is growing, as DHL can improve its services just as clients would like.

### **3.3. The case study HOPI Inc.**

The company Hopi Holding offers storage in all temperature regimes (from -25 to +25 °C). In the Czech Republic, HOPI provides storage in four distribution centres. The company focuses on providing logistics services, such as storage (including dry, refrigerator and freezer storage), packing and assembly services, forwarding services and truck rental (e.g. Full Truckload (FTL), Less Than a Truckload (LTL), parcel), the food

broker - trading and logistics intermediation between suppliers and store chains, the services of a central packaging warehouse, the outsourcing of inventory management, etc.

## Tools for quality development

The Company applies several tools for the achievement of a high level of the quality of the provided services. These tools include, for example, the customization of services, the tracking and operational management of forwarding, a multi-level quality control system and augmenting employees' motivation. The selected tools for quality fulfilment and development include, e.g., tailor-made services, an E-driver system (the provision of special Class E licences for driving for an employer), a Multi-Step Quality Control System and the HOPI Best Driver Competition.

## The HOPI Best Driver Competition in 2018 - a tool for employee motivation

In the first round of the competition, the following driver parameters were evaluated, e.g. the routine duties of the driver within one year, the number of accidents (or other damages) caused by the driver, fuel consumption, driver card reading etc. In the semi-final, the following skills were examined: the process of changing tyre on the vehicle, first aid, resuscitation, road accident procedures and an economical ride on a racing circuit of about 15 km in length. In the final round, the level of driving skills was measured by: reversing the bend + colliding with the cones with the rear of the semi-trailer and the front right wheel - all performed with the measurement of time. During the Super final, the contenders focused on the accuracy of the estimate. The announcement of the winners of the HOPI Best Driver Competition, 2018 is presented in **Figure 2**.



**Figure 2** HOPI Best Driver 2018, announcement of the winners of the competition [11]

## 4. RESULTS

The described tools are primarily geared to the planning and implementation of tailor-made services. Currently, the sharing of current information between the service provider and the client is one of the basic requirements for the implementation of logistics services. It is a prerequisite for storage and transport services. As the DHL Express case study shows, in order to achieve the highest quality of the services provided, it is essential to detect and analyse customer satisfaction. In order to achieve a continuously high level of the quality of service, according to our case studies, it is necessary to perform self-assessment and quality control during all



processes As the HOPI Case Study shows, the range of services and qualitative requirements evolve based on customers' requirements. The prediction of commercial success is therefore based on the continuous development of the services portfolio of the given firm. Given the nature of providing logistics services, human resources are one of the most important bases for service of the highest quality, which is why the education and motivation of employees is one of the basic directions for the achievement of commercial success. Based on our case studies, it is possible to state that a friendly approach to customers, together with the motivation of employees to efficiently execute the services they provide, are two of the most important tools in ensuring the quality of the logistics services provided.

## 5. DISCUSSION

A prerequisite to commercial success is a greater degree of interconnection between the supplier and the customer. The supply and provision of logistics services (at higher levels) translates into taking care of the client. Thus, the development of service itself depends on tendencies in the development of supply networks and on the changing role of providers. Based on the above-mentioned knowledge, the main source of success and the main driving force of logistics services is HR. Subsequently, the regular education and motivation of staff is an essential element for the efficient provision of logistics services at all levels.

## 6. CONCLUSION

This article presents basic information on levels of (first, second, third, fourth, etc.) party logistics. The basic elements of the concept of quality and the related objectives are defined. The case studies include selected quality management tools which are used in logistics companies with a focus on the role of staff in logistics services. Based on these case studies, we have established that the continuous development of services evolves based on changing requirements. The ability to manage unexpected changes during service provision is becoming increasingly important. The quality of service and the commercial success of the service provider depends primarily on the staff. Modern trends in the HR management of logistics staff are applied in different ways (for example, motivation with the help of both financial and non-financial tools, training sessions focused on quality standards fulfilment, etc). The current requirements for logistics staff could be fulfilled only with the help of long-term HR management and the search for new methods for the motivation and education of employees.

## REFERENCES

- [1] LIŽBETINOVÁ Lenka., HITKA Miloš, LI Chenguang, CAHA Zdeněk. Motivation of Employees of Transport and Logistics Companies in the Czech Republic and in a Selected Region of the PRC. *18<sup>th</sup> International Scientific Conference - LOGI 2017*. MATEC Web of Conferences, 2017, Vol. 134, p.8.. DOI: 10.1051/matecconf/201713400032
- [2] RAWLINS, Ashley. R. *Total Quality Management (TQM)*. USA: AuthorHouse. 2008, p. 352.
- [3] SEYED-ALAGHEBAND, Seyed-Alireza. *Logistics Parties. Logistics Operations and Management*. Elsevier Inc. 2011. <https://doi.org/10.1016/B978-0-12-385202-1.00005-0>
- [4] LUN, Y.H. Venus, LAI, Kee-hung, WONG, Christina W.Y. and CHENG, T.C.E.. Greening propensity and performance implications for logistics service providers. *Transportation Research Part E: Logistics and Transportation Review*, 2015. 74, pp. 50-62. <https://doi.org/10.1016/j.tre.2014.10.002>
- [5] COLLIS, Jill and HUSSEY, Roger. *Business Research: A practical guide for undergraduate and postgraduate students*. 2<sup>nd</sup> ed. New York: Palgrave Macmillan. .2003 p.374.
- [6] YIN, Robert K. *Case Study Research: Design and Methods*. 3<sup>rd</sup> ed. London: Sage, 2003. 181 s.
- [7] GATTORNA John. *Strategic Supply Chain Alignment: Best Practice In Supply Chain Management*. Routledge., 2017. p.686



- [8] KOLASIŃSKA-MORAWSKA Katarzyna, BRZOZOWSKA Marta. New Technologies And Logistic Education Against Challenges Of The Economy 4.0. *Przedsiębiorczość i Zarządzanie*. 2018, Vol. 19no. 5.1., pp. 279-292 Issue Year: 19/2018
- [9] ELA Certification for Logistics Professionals: Standards. In: European Certification Board for Logistics. European logistics Association. ©2004. Date: 29.01.2019 [viewed]. Available from <http://www.czech-logistics.eu/wp-content/uploads/2018/10/ELAstandards.pdf>
- [10] BAILEY Catherine, MANKIN David, KELLIHER Clare., GARAVAN Thomas. 2018. *Strategic Human Resource Management*. 2nd ed. Paperback. 2018. Pp.416 ISBN: 9780198705406
- [11] HOPI, 2019. Date: 29.01.2019 [viewed]. Available from <https://hopi.cz/>