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LOGISTICS AND LOGISTICS PROCESSES IN A TOURISM DESTINATION*

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Abstract: Logistics is a scientific discipline, a business function and an activity that, in recent times, is increasingly being applied to economic and social activities, because it enables the production of a quality product at a moderate cost. With regard to the trend for globally applying the principles of logistics to all spheres of human activities, the phenomenon of tourism presents a special challenge. Moreover, it is becoming evident that a quality tourism product, the design of which is linked to a tourism destination, depends largely on the scale of optimisation of all flows (goods, people, information, energy, waste, capital and knowledge) within a destination.

The purpose of this paper is to define the function of logistics in tourism and in a tourism destination. Also defined are the concepts of tourism logistics and tourism destination logistics, the concept of a tourism logistics system and its elements – subsystem, as well as logistics processes - chains. Special emphasis is placed on the importance of optimising logistics processes in a destination, in which logistics management and process management are indispensable.

Key words: logistics process, tourism destination, logistics manager.

INTRODUCTION

Little more than half a century has passed since the first steps were made in applying logistics principles to businesses; since then, logistics has found applications in social services and in all areas of human activities. Following this development trend, logistics has come to be applied in tourism and in the tourism destination which

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is assuming the features of a logistics system and which acts as the basic nucleus in shaping the tourism product. Focus is placed on processes that are organised according to logistics principles and that play a vital role in ensuring the quality of a destination's tourism offering. The "classic", rigidly structured organisation of work in enterprises is increasingly giving way to a process approach, because logistics process management is centred on the continuation, rationality and coordination of all process segments. In companies striving to achieve the logistics objectives of reducing business costs and meeting consumer satisfaction, logistics is organised as a business function to integrate all other functions. In a later phase of development, a logistics manager is positioned high in the organisation structure and put in charge of coordinating and applying the principles of logistics management. A question is raised as to the opportunities, potential and scope of logistics management in tourism and in the tourism destination, as well as its possible impact on the quality of the tourism offering.

1. CONCEPT AND MEANING OF LOGISTICS

Logistics is a scientific discipline concerned with seeking methods for optimising the flow of material, goods, information and energy (and people) with the aim of achieving the greatest economic effect possible. In carrying out its tasks, logistics applies scientific tools and methods of many scientific disciplines; hence, it should be perceived as an interdisciplinary and multidisciplinary field.² **Logistics as a business function** deals with managing the flow of goods, the movement of material and finished products from the procurement of raw materials, across processing, and then on to the end consumer.³ Its primary objective is to optimise the flow of materials, goods, information, energy (and people) within a company, with the aim of achieving the highest profits possible.

Logistics as a scientific discipline is the basis for setting up logistics as an activity. As an activity, logistics implies a specific spatial coverage in which different processes are carried out.

The primary **goal of logistics is customer or consumer satisfaction⁴, and this is achieved through the basic objectives** of:

- **overcoming space and**
- **overcoming time.**

Many factors impact on achieving these objectives, and this is reflected in the quality of logistics products and services.

Overcoming space depends on the distribution of elements between which tangible and intangible flows are organised, and on the possibilities available for transportation, warehousing, transshipment and storage. Overcoming time in logistics

² Zelenika, R., et al., *Suvremeno promišljanje temeljnih fenomena logističkog sustava*, Zbornik radova Ekonomskog fakulteta u Rijeci, Rijeka, 2000, Vol. 18, No. 2, pp. 59-63.

³ Ferisak, V., et al., *Poslovna logistika*, Informator, Zagreb, 1983, pp.1-2.

⁴ Waters, D., *Logistics – An Introduction to Supply Chain Management*, Palgrave Macmillan, Mendham, 2003, p. 28.

marks an inconsistency – a reduction in time will lead to a reduction in cost, but only to a certain limit, beyond which the increase in fuel costs due to higher speed will exceed the savings gained by reducing time.

Overcoming space and time in logistics is achieved by managing the flows of materials, semi-products, goods, capital, knowledge, information and energy from the sender to the recipient. A specific feature of the logistics concept in tourism is that it focuses on optimising tourist flows, across a broad geographical area, to and from a destination as well as within a destination.

Logistics is carried out through the elements of logistics functions. These are:

- **external transportation (traffic),**
- **internal transportation,**
- **handling materials and goods,**
- **inventory management.**

In addition to these, the modern approach to logistics deals with certain other elements, which are considered the elements of a logistics system, such as: customer or consumer service, packaging (for tangible products), processing and transmitting information, demand forecasting, planning production, supplying input materials and services for producing a logistics product, the location of logistics infrastructure, and other elements.

2. LOGISTICS SYSTEMS

The need to define logistics and study it as a system was apparent in scientific thought in Croatia fairly early in the second half of the twentieth century, when it began to take the form of a scientific discipline.

A systems approach to logistics was used to encompass and underline:

- **Its breadth and complexity,**
- **The need to integrate the parts of logistics to accomplish the goal.**

According to Professor Vilim Ferisak, Ph.D.⁵, “a logistics system consists of a series of logically interrelated elements that have any impact whatsoever on the cost of transporting, warehousing and handling products”. He goes on to list the elements of logistics systems – transportation, storage, inventory, distribution, handling, people, information systems and integration – and to define their functions.

Several years later in collaboration with Professor Ladislav Stihovic, Ph.D.⁶, the same author underlined that “in conceptual terms, a logistics system begins with the customer, and continues across different levels: sales intermediates, sales warehouses, despatch, end-products warehouses, production, assembly-parts warehouses, working stock warehouses, procurement and suppliers. The flow of information evolves in

⁵ Ferisak, V., et al., *Poslovna logistika*, Informator, Zagreb, 1983, p. 3.

⁶ Ferisak V., et al., *Nabava i materijalno poslovanje*, Informator, Zagreb, 1989, p. 11.

alignment with this flow, starting with a survey of market needs, while the flow of physical goods unfolds in the opposite direction (from the supplier across procurement, production and sales to the customer).”

European scientific thought speaks increasingly in favour of a systems approach to logistics. Logistics is based on a system, meaning that all its elements need to operate within a whole. This means desisting from the objectives of maximising certain business functions (such as marketing or production), providing such objectives are not consistent with the objectives of a company’s logistics.⁷

Research focuses, in particular, on logistics centres and their location, and on the impact of optimising the macro logistics system, thereby indirectly demonstrating the networked structure of a logistics system in a broad geographical area.⁸

“Logistics systems are systems of the time- and space-related transformation of goods, and the processes that flow within them are logistics processes”⁹. As with the previous authors, emphasis is placed on the importance of integration between the process of movement and the process of inactivity”. Whereas, previously, logistics largely referred to the flows of goods and information, today this concept has spread to include the flows of energy and people. This broadening understanding of logistics is encouraged by the development of logistics sciences in other European countries. According to this trend, logistics is linked not only to the production and distribution of goods, but also to the production of services. Logistics is not limited only to the economic sector, but can and needs to be applied to non-economic activities as well (schooling, education, sport, etc.). Global logistics is also developing alongside the general globalisation of the economy and all the regions of social and individual activities.

The scholar Danilo Pozar¹⁰ also speaks in favour of a systems approach to logistics. He argues “the subject of logistics considerations refers not only to the path and origin of materials and related information, but also to the attributes (organisation, capacity, equipment, capability of managers and workers, location, etc.) of operators within this chain (suppliers, forwarders, carriers, companies, logistics centres, despatch, storage, customs, middlemen, businessmen, etc.). He goes on to say that logistics flows involve “overcoming space and time, people, material (in the broader sense of raw materials, semi-products, auxiliary products, finished products, packaging, etc.) and information, from the source to the destined location”¹¹. He also argues that globalisation has had the greatest impact on logistics.

⁷ Gattorna, J., et al., *Effective Logistics Management*, Logistics Information Management, 1991, Vol. 4, No. 2, p. 3.

⁸ *Study on the Location of Logistic Nodes*, ISTIEE, Trst, 1998, pp. 38 -39.

⁹ Segetlija, Z., et al., *Distribucija- Logistika- Informatika*, Ekonomski fakultet, Osijek, 2000, p. 86, after Pfohl, H., Ch., *Logistiksysteme*, Springer Verlag, Berlin, 1985, p. 3; Segetlija, Z., *Uvod u poslovnu logistiku*, Ekonomski fakultet, Osijek, 2002, p. 22; Samanovic, J., *Logisticki i distribucijski sustavi*, Ekonomski fakultet, Split, 1999, p. 15, after Pfohl, H., Ch., *Logistiksysteme*, Springer Verlag, Berlin, 1990, p. 7 and 8.

¹⁰ The scholar Danilo Pozar deserves full credit for introducing logistics not only into the Faculty of Economics and Business in Maribor, but also, indirectly, into Croatian faculties.

¹¹ Pozar, D., *Logisticki pristup rjesavanju suvremenih prometnih problema*, Zbornik radova «Promet i održivi razvitak», HZDP, Zagreb, I dio, 2000, p. 21.

Also in line with the modern view of logistics and the systems approach is the opinion of Professor Ratko Zelenika: "... logistics systems are increasingly more complex, implying the coordination and organisation of a large number of logistics phenomena, and bringing down the barriers between different business functions within business ventures, and within and between different national economies and logistics systems."¹² By defining a logistics system as being dynamic and stochastic, he underlines the importance of subsystems and their functions, confirming the premise of the complexity of logistics systems.

Zdenko Zekic, Ph.D., considers that contemporary logistics thinking involves taking a systems approach. Out of many definitions, he opts for the one stating that: "Systems for the space- and time-related transformation of goods are logistics systems, so logistics is engaged in processes for overcoming space and time". This definition is in line with the achievements of logistics as a scientific discipline in German science.¹³

A systems approach, together with an interdisciplinary and multidisciplinary approach, continues to prevail in contemporary research on logistics in world science. "Logistics processes impact on every area of human activities, either directly or indirectly." Hence, a logistics system "encompasses the flow of goods, services and information in the production and service sectors."¹⁴ The production sector consists of operators engaged in producing the most diverse products – "ranging from automobiles, computers, cosmetics to food products". The operators in the service sector playing a special role in a logistics system include "government organisations, hospitals, banks, universities, retailers and wholesalers."¹⁵ This way of defining a logistics system represents the basis for defining the specific logistics of various areas of human activities, which, having the same fundamental objective, endeavour to accomplish the specific partial objectives pertinent to each individual activity. Such an approach to logistics entails introducing and defining logistics as a network composed of activities for optimising the flow of material and information in logistics chains.¹⁶ Directing logistics processes towards predetermined goals is the basis on which **logistics management (managing logistics processes)** is built.

Globalised production, growing competitiveness in the marketplace, organisation integrations and time reduction in fulfilling sales contracts¹⁷ are the prevailing trends that are shaping today's logistics concepts and will continue to dictate the development of logistics in the future. This leads to the conclusions that:

- The presence and importance of integration processes will continue to grow within a logistics process extending from procurement across production to sales;

¹² Zelenika, R., Pupavac, D., *Suvremeno promislanje temeljnih fenomena logistickoga sustava*, Zbornik radova Ekonomskoga fakulteta u Rijeci, Rijeka, 2000, sv. 2, p. 59, 64 and 65.

¹³ Zekic, op.cit., p. 25, after Pfohl, H. Ch., *Logistiksysteme, Betriebswirtschaftliche Grundlagen*, 5 Auflage, Springer, Berlin, 1996, p. 12.

¹⁴ Stock, J.R., Lambert, D.M., *Strategic Logistics Management*, McGraw – Hill Irwin, Singapore, 2001, p. 3.

¹⁵ Ibidem, after Smith, P.A. et al.m, *Logistics in Service Industries*, Oak Brook, IL: Council of Logistics Management, 1991, p. XVII.

¹⁶ Ibidem, p. 4.

¹⁷ Christopher, M., *Logistics and Suplly Chain Management*, Prentice Hall, London, 1998, p. 23.

- The desire of operators in production for a better quality of logistics services and products and higher profits will encourage the building of network structures, the composition of which will become increasingly complex and heterogeneous;
- Managing logistics processes will become increasingly more efficient,
- Because of the above premises, it will not be possible to study phenomena in logistics other than through a systems approach.

Taking into account the above trends and outlooks in logistics, supported by current developments, **logistics systems** can be defined as **space- and time-related change to goods, information, energy and people, that use networked organisations to direct processes in achieving high quality and low costs**. These systems are becoming increasingly complex, making research all the more costly and complex; however, due to modern trends in the economy and other areas of human activities, there is no other alternative, meaning that a systems approach to logistics phenomena will continue to prevail.

3. LOGISTICS PROCESSES AND CHAINS

Many processes take place within and among a system's elements, processes that, in specific forms and dynamics, extend into the environment. They make use of a system's external and internal links¹⁸ as their "infrastructure". These links are static in nature and represent channels through which flow materials, semi-products, finished products, information, people, waste, surplus raw materials and others. Along these courses, specific facilities, devices and equipment already exist that do not need to be repeatedly procured, making flows fast and efficient.

Multiple channels that cross in specific points constitute a network¹⁹, that is adapted to the dynamics and strength of logistics flows through the directions in which the channels extend, the points where they meet and the throughout they possess. Flows can sometimes be interrupted, develop at uneven speeds, or encounter delays. In fact, delays occur very frequently and are caused by: incompatibilities between the capacities of transportation means, in particular, when passing from one transportation branch onto another; the failure to immediately provide the required transportation means; customs formalities at national border crossings; the failure to have the right information at the right time... As a rule, delays occur at the points where channels meet: at freight terminals (ports, quays, railway stations, airports...), passenger terminals, collection and distribution centres, warehousing complexes and so on.

The more complex the logistics system, the more numerous the logistics processes. A degree of simplification is required in studying these systems. This simplification focuses on the logistics processes essential to achieving the goals of a

¹⁸ Ferisak, V., *Organizacija materijalnoga poslovanja*, Informator, Zagreb, 1995, p. 8.

¹⁹ Pamanovic, J., *Ibidem*, p. 15.

logistics system, while disregarding secondary processes. According to some sources, essential logistics processes include:²⁰

- Transportation, regrouping and storage relating to the flows of goods,
- Packaging and marking that facilitate the flows previously mentioned,
- Submitting and processing orders relating to the flows of information.

The flows of goods essential in realising the goals of a logistics system, as well as the flows of information that are “exchanged prior to, during and upon the complete product flow” are considered to be logistics processes because they “challenge, monitor and interpret, control and track, and confirm or indicate deviations”.²¹ Following on this distinction of logistics processes, some authors tend to classify logistics systems as logistics information systems and physical logistics systems.

The network of channels along which the flows of goods and information move can also be used for the movement of people, energy and all other flows that logistics systems seek to optimise²². Like the previously mentioned flows, these are also logistics flows and they represent a variable quantity with regard to intensity, quantities and uniformity.

Recently, logistics has increasingly come to be identified with the processes that are specific to it. Following on this, logistics can be considered “as a process of the strategic management of the procurement, transfer and storage of materials, parts and finished products (together with corresponding information flows) through organisation and marketing channels so as to maximise present and future profitability by minimising the cost of fulfilled contracts.”²³

Equating logistics with logistics processes is extremely important as this leads to identifying the management of logistics process with logistics management.

A vital feature of modern development trends in logistics is the growing number of diverse objects its processes transfer. While in its beginnings logistics involved the flows of goods and information and in time extended to include the flows of people and energy, today most authors agree that capital and knowledge are also transfer subjects in logistics processes. This is in alignment with the spreading application of logistics in all sectors of economic and social activities. However, it tends to make studying logistics phenomena, systemising scientific and professional knowledge, and defining regularities all the more complicated.

Cost reduction is achieved by organising logistics flows in such a way that minimises delays, waiting, damages and losses. This can be accomplished by organising logistics processes according to the chain principle. In the broadest sense, a chain implies a number of equal (values and roles) and close-knit links that constitute

²⁰ Segetlija, Z., Lamza-Maronic, M., Ibidem, p. 88.

²¹ Segetlija, Z., Ibidem, p. 25.

²² Samanovic, J., Ibidem, p. 15.

²³ Christopher, M., Ibidem, p. 4.

an uninterrupted functional whole. Hence, a **logistics chain is a logistics process in which all parts are well connected to ensure the fast and efficient flow of the transfer subject.**

It can be concluded that a logistics chain interconnects the transfer subject, the activities directly involved in transfer, the elements that enable transfer, and the activities that are not directly involved in the transfer but without which the objectives of logistics could not be achieved. Hence, it can be accepted that **“a logistics chain is a set or series of interrelated and interest-based links, that is, logistics partners and participants in logistics activities, that ensure the fast, safe and rational processes, which produce logistics products.”**²⁴

Vital features of any logistics chain are its **geographical scope** and its **level of complexity**. With regard to their geographical scope, logistics chains are national, international or global. They are usually classified according to distances, but frequently according to complexity as well. The number of participants in a logistics chain determines its level of complexity.

Logistics chains can also possess other attributes. Professor Zelenika claims that:²⁵

- Although each participant-link in a chain has its individual interests, they all have a shared interest in collaboration.
- The number of links determines the length of a chain (making it a short, long, mega or global chain);
- The links also vary in size (small, medium-sized, large...).
- Ties between links vary from weak to very strong.
- The stability and strength of ties benefits from properly arranged legal relations between participants in a chain.
- As a rule, each chain has a link-coordinator.
- The role of the coordinator is to ensure fast, safe and rational flows within a chain.

Knowledge of these features makes it possible to create the “structure” of a logistics chain, which includes the rules of making flows both lasting and efficient.

4. FUNCTIONAL DELIMITATION OF LOGISTICS SYSTEMS

Most authors speak in favour of determining logistics systems in terms of functions. These activities – functions are a vital part of a logistics system, and they include submitting and processing orders, transportation, storage, inventory management and packaging²⁶. The processes that take place in these subsystems are crucial for accomplishing logistics goals.

²⁴ Zelenika, R., Skender-Pavlic, H., *Upravljanje logistickim mrežama*, Ekonomski fakultet, Rijeka, 2007, p. 140.

²⁵ Zelenika, R., *Logistički sustav*, Ekonomski fakultet, Rijeka, 2005, pp. 63-65.

²⁶ Samanovic, J., *Ibidem*, p. 18; Segetlija, Z., Lamza- Maronic, M., *Ibidem*, pp. 88-89; Segetlija, Z., *Ibidem*, pp. 25-27.

According to some authors, the storage function, organised as a separate subsystem that possesses an appropriate infrastructure, human resources, and organisation of work, is the most important part of a logistics system. The role of the warehouse and storage is to mitigate the time-related asymmetry in the flow of goods (raw material, semi-products and finished products) as a result of delays in the organisation of flows of goods and information from the supplier to the customer.

Warehouses, therefore, enable this time-related asymmetry to be bridged painlessly. The function of warehouses in logistics flows is unique and irreplaceable and this is reflected in the higher overall costs of a logistics chain.

In contemporary logistics a more comprehensive approach prevails that takes into consideration some other functions and services that are essential in accomplishing logistics goals. The incoming variables (input) of logistics systems include:

- **natural resources (land, infrastructure and equipment),**
- **human resources,**
- **financial resources and**
- **information.**

The outgoing variables (output) of logistics systems are:

- **a competitive advantage gained through a marketing orientation and efficiency,**
- **delivery effected to a customer at the right time and in the right place,**
- **delivery efficiently effected to a customer.**

In a logistics system, input planning enables the ingoing variables to be used in a supervised manner to ensure the production of semi-products – to be used for subsequent production in another logistics system – from the given raw material, parts, semi-products, packaging material and others, or the production of finished products for the end customer. The entire flow of goods and information can also be directed towards the production of services; in this case, inputs and outputs will be somewhat different and the roles of logistics functions will be adjusted to the ultimate objective of the logistics system.

5. SECTORIAL DELIMITATION OF LOGISTICS SYSTEMS

Of the various development trends in logistics, highly significant is the expansion of logistics from a national economic system into social services; this is referred to as the sectorial delimitation of logistics²⁷. Namely, because logistics in the economy has managed to reduce business costs and enhance customer satisfaction, it was rightly assumed that similar effects could be obtained in social services as well. While earmarking considerable budgetary funds for the operation of these services, governments feel that the quality level of these services is not up to mark. On the other

²⁷ Zelenika, R., *Logisticki sustav*, op.cit. p. 309; Zelenika, R., Pupavac, D., *Suvremeno promisljanje temeljnih fenomena logistickog sustava*, Zbornik Ekonomskog fakulteta u Rijeci, Rijeka, 2000, god.18, sv. 2, p. 59.

hand, the providers of these services consider funding to be inadequate, thus making it impossible to attain a higher level of service quality.

Logistics makes it possible to maximise savings on budgetary resources by organising enterprises more efficiently and by consistently overseeing the movement of all logistics flows within them. The application of logistics in all areas of organised human activities opens up opportunities for rationalising the way these activities are organised and for enhancing the quality of services to consumers.

Through the sectorial delimitation of logistics, all activities in which logistics already exists or to which it can be applied are systemised in a clear and comprehensive manner. Logistics systems are thus classified into subsystems of:

- primary
- secondary
- tertiary
- quaternary and
- quintenary logistics.

The subsystems of primary logistics include activities engaged in the direct extraction of goods (agriculture, mining, forestry and fishing-industry logistics). The subsystems of secondary logistics include the production, construction and energy-production industries. Service industries and the logistics applied to them are subsystems of tertiary logistics (commercial, transportation, tourism, storage and forwarding logistics...). Education, science, health care, culture, sports, etc belong to the subsystem of quaternary activities and their associated logistics, while the quintenary sector includes the logistics of administration and the judicial system, military logistics, police logistics, security logistics, etc.²⁸

For the purpose of studying the logistics of tourism destinations and tourism, it should be noted that tourism logistics and hospitality logistics belong to the tertiary sector.²⁹ The objective of tertiary-sector logistics is to produce quality services at the least possible cost.

6. TOURISM LOGISTICS

Tourism logistics represents the space- and time-related transformation of material, people, information, energy, waste, knowledge and capital aimed at providing quality tourism services at the lowest possible costs. Tourism logistics systems are highly complex and dynamic phenomena, of varying spatial coverage and displaying a pronounced openness towards the environment. The size of spatial coverage depends upon transportation systems and their ability to provide fast, comfortable and increasingly cheaper transport across the longest distances. The dynamism of a tourism system hinges on the number of its users who react quickly and conspicuously to even the smallest change in the tourism offering. A tourism system's

²⁸ Zelenika, R., Pupavac, D., op.cit., p. 65.

²⁹ Zelenika, R., op.cit. p. 415.

complexity is conditioned by intricate demand and the growing number of diverse destination offerings around the world.

A tourism logistics system consists of several groups of activities that interact in complex ways to produce a tourism product acceptable to the tourism market. These subsystems include the hospitality subsystem, the tourist agency subsystem, the transportation subsystem, and the subsystem of tourist attractions.

A **hospitality-logistics subsystem** primarily involves optimising the flows of goods, information and people, and its products include food and beverage services and accommodation services. How high the quality and how low the price of the food and beverage service will be depends on the extent to which the logistics system is capable of optimising the flow of material, semi-products and finished products needed for the end product. Mostly, this refers to physical flows from a supplier, across production (preparing food) to a consumer (tourist). As mentioned earlier, the spatial coverage of flows may vary with the application of logistics chains and networks.

Agency-logistics subsystems seek to optimise the flow of information in a specific area. These subsystems capture information regarding the supply of and demand for tourism services, transmit this information through specific channels, and bring supply and demand together, for an agency fee (commission). They can also bring together different forms of the tourism offering and shape them into a singular product (trip) to be offered on the tourism market, as a source of increasing an agency's earnings. Tourist agencies have great potential in directing tourism-logistics flows along specific lines – channels, which can enable them to act as logistics nodes for collecting and distributing flows within logistics networks.

Transportation logistics systems represent the space- and time-related transformation of flows of goods, people, information and waste for the purpose of producing a tourism product. Optimum flows of goods are achieved in collaboration with hospitality and commercial subsystems. These flows impact heavily on the attributes of a tourism destination by determining its level of supply. Optimum flows of people – visitors contribute to creating a sense of pleasure or displeasure and are perceived as either well-organised or poorly organised transportation services. As such, they exert considerable influence on the quality of a destination's entire product.

Tourist attraction subsystems represent the optimisation of logistics flows for the purpose of offering a destination's attractions to visitors in the most efficient way possible. Tourist attractions include national parks, nature parks or other protected areas, museums, cultural and historical monuments, shopping centres, entertainment, cultural and other events, etc. In other words, a tourist attraction is anything that can attract potential visitors and motivate them to travel to a destination. The offering, presentation, promotion and sales of tourist attractions should be designed beforehand and organised in such a way that makes visitors feel they are getting value for their money.

7. TOURISM DESTINATION LOGISTICS

Spatial coverage is especially important for tourism logistics. It manifests itself as global logistics, mega logistics, macro logistics, meta logistics and micro logistics. Because the concept of a tourism destination always implies a specific spatial coverage and because the level to which logistics processes within the boundaries of a destination have been optimised will impact on the quality of a tourism product, this justifies the need for defining, applying and developing the logistics of a tourism destination.

Tourism destination logistics represents the optimisation of the flows of material, people, information, energy, waste, knowledge and capital within a specific area for the purpose of providing a quality tourism product.

The objective is, therefore, to align all physical and intangible flows that are directly linked to tourism or motivated by other causes within the area of a tourism destination. This alignment of flows is aimed at providing a high-quality tourism offering and at enhancing the business efficiency of all companies.

The macro logistics system of a tourism destination represents the optimisation of flows of material, people, information, energy, waste and capital that are directed towards a tourism destination or evolve within a tourism destination in a specific geographical area.

The boundaries of the geographical area encompassed by the macro logistics concept can be defined in different ways. They can encompass the space from tourism-generating markets to the destination, together with the destination, or they can encompass a tourism destination by itself. Regardless of the size of the area, it should be noted that the principles regulating flows within a tourism destination differ from the principles applied to areas between a destination and the tourism-generating markets.

The lowest scale of optimising the flow of goods is based on the notion of consolidating the storage functions for identical product groups through detached wholesale warehouses that procure and store the widest range of products for the needs of a tourism destination. Even though the collection of goods is linked to a small number of locations, the transportation infrastructure is nonetheless burdened with non-productive transports, and transportation vehicles, with frequent delays and empty hauls. Because passenger flows are not separate from goods flows, freight vehicles, as a rule, move about a tourism destination thus aggravating and blocking the flow of passengers.

The highest scale of optimisation is achieved by organising a storage and distribution centre in the immediate vicinity of a tourism destination. This centre takes on the function of storing agricultural and industrial products, with or without wholesalers as intermediaries, as well as the function of distribution to local storage facilities within the destination itself. This macro logistics concept provides the opportunity for optimising the flow of goods towards a tourism destination, improving

the utilisation of transportation vehicles and enabling them to come to a stop at a destination's outskirts, thus separating the flow of goods from the flow of people.

The micro logistics system of a tourism destination involves logistically organised tourism companies and other tourism-related companies in the area of the destination. These companies are capable of providing top-quality services at affordable prices, because they have substantially reduced costs by optimising the flows of goods, people, information, energy, waste, knowledge and capital.

The scale of optimisation in macro logistics systems impacts on a company through procurement logistics and sales logistics, because it is through these business functions that the link between a company and its environment is created.

The role of micro logistics, that is, the logistics of individual tourism companies and tourism-related companies is also the same with regard to achieving the primary general objective of a company, whereas considerable differences emerge in achieving a company's specific objectives.

Procurement logistics is of the greatest importance to hotel companies, whose objective it is to provide accommodation services, food and beverage services and other services to tourists. The task of procurement logistics is to ensure the supply of a hotel with the required materials, while planning and maintaining optimum levels of inventory for the production of complex hotel services. Improved financial effects may also be achieved by coordinating the flows of tourists in arrival and departure with regard to the type of arrival (independent travel, package tours), type of services, the type of additional hotel facilities and services used, the means of transportation used, etc.

A tourist agency is engaged in organising tourist travels in a specific part of the market. In achieving this business objective, good information flows are of crucial importance. Based on these flows, an agency will draw up its market policy and plan the required capacity of its own or rented transportation vehicles over a specified period of time depending on the anticipated volume of flows of people who will take its tourist trips.

For a commercial company, the primary target is to ensure the supply of food products, consumer goods and other products. To achieve this, it is necessary to determine the volume of inventory needed to ensure regular supply at the lowest possible cost.

As transportation is a vital component of logistics, companies in a tourism destination will perform efficiently providing the function of transportation is properly carried out. Hotel companies are capable of planning occupancies with considerable accuracy, which enables them to adjust supply accordingly. Catering facilities plan their services in terms of time and quantities, and so keep inventory at a minimum without jeopardising their performance. Shops can adjust their activities to the prompt delivery of various products, especially if a distribution centre is located in the vicinity.

Hence, optimising the flow of people and freight within a tourism destination is a precondition to reducing the costs of each individual company in that area, and, ultimately, providing a less costly but higher-quality tourism service.

8. LOGISTICS MANAGEMENT AS PROCESS MANAGEMENT IN A TOURISM DESTINATION

As a scientific discipline, logistics explores the methods for optimising logistics flows, because having sound knowledge of the process's regularities makes it possible to guide the process towards its planned target. Guiding this process is nothing other than managing the process. For a tourism destination, this means delivering logistics processes in a previously planned manner to ensure that their coordinated development leads to the creation of the best possible tourism product.

The management of logistics processes in a tourism destination can have a macro logistics scope, in which case it is viewed as tourism destination management, or it can be limited to a micro logistics system – a company, and regarded as logistics management.

How a destination should be managed and by whom are questions vital to the development of both the destination and tourism as a global phenomenon. Practice and theory offer a variety of possibilities that display a disparity in terms of efficiency depending on the institutional conditions impacting on a given destination. However, there is a consensus as to what destination management should include: these are all the elements that participate in generating the tourism product of a destination, as well as the processes evolving within and between them. Hence, all destinations, which had previously based their development on long-term development plans that sought to include all elements and occurrences regardless of the force of their impact on tourism in a destination, were already on the path of today's conventional concept.

Having set off the business functions of procurement, production and sales as logistics functions and having brought about their efficient integration to optimise logistics flows by introducing logistics as a special business function in the organisational structure, logistics process management achieves its full economic value through the so-called process approach to organising.

Logistics management is increasingly stepping out of the framework of logistics as a business function. To increase profits and customer satisfaction, logistics managers are taking on the role of leaders of logistics processes, regardless of the distances between participants and the number of participants in the process. In this way and by selecting a team of operative logistics managers who do not necessarily have to be employees of a given company, the rigid organisational structure of the company is broken down and a process organisation is inaugurated.

9. CONCLUSION

Logistics deals with finding methods to optimise the flows of material, goods, information, people, energy, knowledge and capital with the aim of producing, at the lowest possible cost, a product that will meet customer or consumer satisfaction.

Logistics systems represent the space- and time-related transformation of goods, information, energy, people, capital and knowledge using networked organisations to guide processes in realising high quality and low costs. These are high complex, dynamic, interdisciplinary and multidisciplinary systems, which makes them all the more difficult to study.

Many processes take place within and among a system's elements, processes that, in specific forms and dynamics, extend into the environment. They make use of a system's external and internal links as their "infrastructure". These links are static in nature and represent channels through which flow materials, semi-products, finished products, information, people, waste, surplus raw materials and others. Multiple channels that cross in specific points constitute a network, that is adapted to the dynamics and strength of logistics flows through the directions in which the channels extend, the points where they meet and the throughout they possess.

A logistics chain is a logistics process in which all parts are well connected to ensure the fast and efficient flow of the transfer subject.

The functional determination of logistics system involves all activities – functions – that are a vital part of logistics systems, whereas sectorial delimitation involves all economic and social activities, to which logistics can be applied, classified in sectors ranging from primary to quinary.

Tourism logistics represents the space- and time-related transformation of material, people, information, energy, waste, knowledge and capital aimed at providing quality tourism services at the lowest possible costs. A tourism logistics system consists of several groups of activities that interact in complex ways to produce a tourism product acceptable to the tourism market. These subsystems include the hospitality subsystem, the tourist agency subsystem, the transportation subsystem, and the subsystem of tourist attractions.

Tourism destination logistics represents the optimisation of the flows of material, people, information, energy, waste, knowledge and capital within a specific area for the purpose of providing a quality tourism product. The macro logistics system of a tourism destination represents the optimisation of flows of material, people, information, energy, waste and capital that are directed towards a tourism destination or evolve within a tourism destination in a specific geographical area. The micro logistics system of a tourism destination involves logistically organised tourism companies and other tourism-related companies in the area of the destination.

The management of logistics processes in a tourism destination can have a macro logistics scope, in which case it is viewed as tourism destination management, or it can be limited to a micro logistics system – a company, and regarded as logistics management.

REFERENCES

- Christopher, M., *Logistics and Supply Chain Management*, Prentice Hall, London, 1998.
- Ferisak, V., *Organizacija materijalnoga poslovanja*, Informator, Zagreb, 1995.
- Ferisak, V., et al., *Poslovna logistika*, Informator, Zagreb, 1983.
- Ferisak V., Stihovic L., *Nabava i materijalno poslovanje*, Informator, Zagreb, 1989.
- Gattorna, J., et al., *Effective Logistics Management*, Logistics Information Management, 1991., vol. 4, no. 2.
- Mrnjavac, E., *Promet u turizmu*, FTHM, Opatija, 1. izdanje, 2002.
- Mrnjavac, E., *Logistika turističke destinacije*, Promet, FPZ, Zagreb.
- Pozar, D., *Logistički pristup rješavanju suvremenih prometnih problema*, Zbornik radova «Promet i održivi razvitak», HZDP, Zagreb, I dio, 2000.
- Segetlija, Z., *Uvod u poslovnu logistiku*, Ekonomski fakultet, Osijek, 2002.
- Segetlija, Z., Lamza – Maronic, M., *Distribucija- Logistika- Informatika*, Ekonomski fakultet, Osijek, 2000.
- Stock, J.R., Lambert, D.M., *Strategic Logistics Management*, McGraw – Hill Irwin, Singapore, 2001.
- Samanovic, J., *Logistički i distribucijski sustavi*, Ekonomski fakultet, Split, 1999.
- Zekic, Z., *Logistički menadžment*, Glosa, Rijeka, 2000.
- Zelenika, R., *Logistički sustav*, Ekonomski fakultet, Rijeka, 2005.
- Zelenika, R., Pupovac, D., *Suvremeno promišljanje temeljnih fenomena logističkog sustava*, Zbornik radova Ekonomskog fakulteta u Rijeci, Rijeka, 2000., god. 18, sv. 2.
- Zelenika, R., Skender-Pavlic, H., *Upravljanje logističkim mrežama*, Ekonomski fakultet, Rijeka, 2007.
- Waters, D., *Logistics – An Introduction to Supply Chain Management*, Palgrave Macmillan, Mendham, 2003.
- Study on The Location of Logistic Nodes*, ISTIEE, Trst, 1998.

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