Preface

In science literature readers can find several understanding of logistics, which reflected diversity of approaches, understanding and using of logistics in the modern society. Logistics was known for thousands of years and express practices in logistics activities in human development – i.e. from invention of the wheel or even longer. Despite the long tradition the logistics as the Science is a relatively young discipline. The beginning of the modern development of logistic as a science originates in military logistics from II world war. The knowledge and experiences of military logistic were also used for working in different areas of human activities to lead toward development of new scientific disciplines of logistics as technical and business logistics.

Linguistically, the term logistics originated in ancient Greek language and in French word logistique from the 19th century. Modern science uses the term logistics for definition of a discipline of applied nature but for different contexts. Thus, The Oxford English Dictionary defines logistics as “the branch of military science relating to procuring, maintaining and transporting material, personnel and facilities.” On the contrary, the New Oxford American Dictionary defines logistics as “the detailed coordination of a complex operation involving many people, facilities, or supplies.” Additionally, the Oxford Dictionary on-line defines logistics as “the detailed organization and implementation of a complex operation.”

Modern logistics enables surviving and development of humankind, especially through its working in enterprises, as the most influential groups of organizations in the modern society. In enterprises we can generally define logistics as the management of the flow of physical and abstract items between the point of origin and the point of consumption in order to meet requirements of end-customers or corporations. The Council of Supply Chain Management Professionals (previously the Council of Logistics Management) offers a broader definition, which defines logistics as the process of planning, implementing and controlling procedures for the efficient and effective transportation and storage of goods including services and related information from the point of origin to the point of consumption for the purpose of conforming to customer requirements and includes inbound, outbound, internal and external movements.

The entire understanding, design and realization of logistics as an entity of purchasing operations, material management and distribution is decisively influencing the enterprises’ working. They define the possible level of suitability when assuring the needs and demands of end-users. Integrated logistics concepts enable their managing across the traditional functional areas in an organization and enables importantly the optimization of the whole production process of products and/or services.

Logistics today models and analyzes economic systems in time and space as the flow of materials (goods, information, money and people) through different networks. Its purpose is to find a way and form of implementation of such networks in real economic systems by the usage of well-known and recognized scientific methods.
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Scientific questions to which logistics replies mainly relate to the configuration and organization of such networks. In addition logistics must control the release of flows in the network. Its main objective is to achieve a balance between economic, ecological and social objectives.

In this book, contributions of authors are focused on Strategic sustainable logistics and transportation planning strategies. Sustainable logistics support growing needs for integrating environmentally sound choices into logistics management. Therefore, sustainable logistics considers business issues affecting the organization logistics or logistics network in terms of environmental, risk, and waste costs. Key factors for successful logistics include idea of sustainable development in adequate business and logistics strategies, as the key documents of the organization. Consequently, organizations devote more attention also to transportation, with the goal to minimize its impact on environmental, business, and social environments. Organizations develop new and innovative strategies for transportation planning to try to achieve sustainable balance of their economic and environmental efficiency.

Additionally, the book you are reading attempts to highlight the various aspects of logistics as a science, mostly the technical, organizational and social perspectives in interdependence. The technical perspective refers to the interplay of infrastructures, machines, and people. Technical issues arise on all levels of logistics. The organizational or managerial aspect appears at the administrative level of the transactions that activate these flows. Even though the logistics processes are primarily of a technical nature, their implementation is not possible without the people, which play a decisive role in logistics and understanding of social aspects as the (selected) framework for their working.

The chapters in the book try to address most of these aspects and explain the relations between them. From IT solutions to security performance measurement, from intermodal terminals to sustainable logistics strategies or even predicting success of major infrastructure projects can be found in the distinct chapters. The substance in the chapters, which mainly offer concrete and sustainable solutions, is methodically explained and presents an interesting reading even for readers who are not experts in the field of logistics.

The editors would like to acknowledge the help of all people involved in this project. The editors would like to thank each of the authors for their contribution. Our sincere gratitude goes to the chapters’ authors who contribute their time and expertise to this book. The editors wish to acknowledge the contributions of the reviewers regarding the improvement of quality, and content presentation of chapters. And the editors would also like to give a special thanks to IGI global, the publisher, who believed in us and published the book.

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