

Service Science and Logistics Informatics: Innovative Perspectives

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Information Science
REFERENCE

INFORMATION SCIENCE REFERENCE

Hershey • New York

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In this chapter, innovative strategies for logistics processes that can be used practically in business environment are mentioned. For each innovative strategy title, tools that can be used to innovate operations are presented. By innovating logistics processes, logistics providers can fulfill customer needs rapidly and increase their profit because of having competitive advantage.

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A real case is selected for Shenzhen China Overseas Logistics Co. LTD (COL) as the empirical objects to analyze its character of the technology and non-technology innovation, and summarize its inner and outer driving force on promoting the service innovation. Thereafter, the typical service innovative model based on innovative driving force has been discussed.

Section 2
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Chapter 3

Managing Customer-Centric Information: The Challenges of Information and Communication
Technology (ICT) Deployment in Service Environments 46
Martin R. Fellenz, Trinity College Dublin, Ireland
Mairead Brady, Trinity College Dublin, Ireland

This chapter reviews the difficulties inherent in using ICTs to manage customer-related information, and identifies the particular challenges for customer-centric deployment of ICTs. It provides a model of different levels of customer centric information use in organizations which helps understand how companies can become more customer centric in their information use. It reviews implications for future research in this emerging area and concludes that the challenges of ICT deployment and use must be addressed with an uncompromising focus on customer value as the central principle of both ICT design and deployment, and of information management in service organizations.

Chapter 4

Impact of Wireless Sensor Network Technology on Service Innovation in
Supply Chain Management..... 65
Gong Li, North Dakota State University, USA
Jing Shi, North Dakota State University, USA

This chapter provides an overview about wireless sensor network technology (WSN), how this technology can be applied to modern industries and especially bring service innovation to supply chain management. The impact of information technologies on supply chain management and service innovation is discussed. Two case studies are provided to illustrate the application of WSN for service innovation in both cold chain management and healthcare settings.

Chapter 5

Application and Design of Surface Acoustic Wave Based Radio Frequency Identification Tags 97
Han Tao, Shanghai Jiao Tong University, China
Shui Yongan, Shanghai Jiao Tong University, China

It overviews a complementary technology to the integrated circuit based radio frequency identification (RFID) - surface acoustic wave (SAW) based RFID. The fundamental principle and applications of SAW RFID are presented. In order to guarantee the encoding capacity and reliable reading range, the design criteria in coding scheme, tag design and a time domain interrogated reader design are discussed in detail.

Section 3 Logistics Informatics and Information Logistics

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Information Needs of Logistics Service Providers 113

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Hennariina Pulli, Merikotka Research Center, Finland

Antti Posti, Merikotka Research Center, Finland

This chapter studies is on logistics service providers (LSPs) that are representatives of typical Finnish supply chains. The purpose of the chapter is to point out the current level of information sharing in supply chains focusing on the information needs of logistics companies, particularly from the LSP's point of view. It revealed that there is a lack of logistics information in the supply chain. The information distribution should be intensified when aiming at achieving a more efficient supply chain.

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IT Audit for Information Logistics..... 128

Malgorzata Pankowska, University of Economics, Katowice, Poland

It is focused on how information logistics in business organization is supported by standards and best practices of auditing. CobiT, ITIL, ISO/IEC 27002, Val IT as well as the Sarbanes-Oxley Act and ITAF model are analyzed in the aspect of information logistics.

Chapter 8

Information and Communication Technology in Logistics as a Comparative Advantage 144

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In a time, when the “economic crisis” is filling the news, it may seem hard to even think about improvements in terms of research and development, since “there are lacking funds even for the reproduction”. However, also the last economic “revolution” was “born” in a crisis. Therefore it is sensible to look at the current situation as an opportunity for the next economic revolution, bringing the economy a new cycle of development.

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Masayuki Ueda, Sapporo University, Japan

The OR/MS decision support is investigated from a new viewpoint of service. It is shown that OR/MS decision support shares characteristics with service and hence can be considered as a kind of service. It turns out that there is surely a problem with communication gap between decision makers and decision supporters. It is effective to utilize “problem specification”, which is a decision-maker-friendly description of problems, as one approach to bridge the communication gap.

Section 4 Service Sourcing and Supplier Management

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The Case Of Met-Mex Peñoles Supply Chain 173
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*Mario Cantú Sifuentes, Corporación Mexicana de Investigación en Materiales, S.A.
de C.V. Mexico*
Miguel Gastón Cedillo Campos, Tecnológico de Monterrey, Mexico

The quality of service is certainly a complex topic that many companies, although interested in the subject, difficult to address. It is important to define and detect both internal and external suppliers, as well as the cycles and stages of services in which the organization has a close interrelationship with them. In these stages, it is critical to assess the quality of services provided by suppliers.

Chapter 11

- Analyzing Requirements and Approaches for Sourcing Software Based Services 195
G.R. Gangadharan, Novay, The Netherlands
Erwin Fieft, Queensland University of Technology, Australia

The sourcing requirements are identified for software based services (SBS) and associate the key characteristics of SBS (with the sourcing requirements introduced). Furthermore, the sourcing of SBS is investigated with the related works in the field of classical procurement, business process outsourcing, and information systems sourcing. Based on the analysis, it is concluded that the direct adoption of these approaches for SBS is not feasible and new approaches are required for sourcing SBS.

Chapter 12

- Supplier Relationship Management in Health Care 206
Tobias Mettler, University of St. Gallen, Switzerland & SAP Research St. Gallen, Switzerland
Peter Rohner, University of St. Gallen, Switzerland

In this chapter the current findings are adapted on supplier relationship management (SRM) to the health care context. On the basis of a case study a future scenario is developed for drugs supply management and discusses potential performance and quality improvements.

Section 5 Service Management in Industries

Chapter 13

- Cargo Service Dynamics and Service-Oriented Architecture in East Asian Airports 230
Joyce M.W Low, National University of Singapore, Singapore
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Xue-Ming Yuan, Singapore Institute of Manufacturing Technology, Singapore

Findings from this chapter show that while conducive economic conditions continue to play a critical role in stimulating demand for cargo service at the airports, the importance of physical architecture has also dramatically risen relative to human factors. Particularly, adequate provisions and utilizations of physical facilities for landside operations appear to be a more significant driving force for demand of an airport's cargo service compared to those of airside operations. Despite the strong emphasis on swift and reliable services, cost savings are found to have regained their importance in the recent years.

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<i>Yang Li, Applications & Services, Research & Technology, British Telecom, UK</i>	

Service level agreement (SLA) is becoming an increasingly sought-after topic in recent years, as complex logistics and service chains span across geographical boundaries in the lights of globalization and new technological developments. This chapter introduces the state of the art of the lifecycle management of SLA for service enterprises, which covers stages of terms optimization, contract drafting and compliance tracking. In particular, the deficiencies are identified in the area of term optimization and outline several R&D tracks that would lead to the development of industry-strength SLA optimization capabilities.

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<i>Madan Mohan Dey, University of Arkansas at Pine Bluff, USA</i>	
<i>Charles-Henri Fredouet, School of Logistics, France</i>	
<i>Hing-Po Lo, City University of Hong Kong, China</i>	
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<i>Albert K. Toh, University of Arkansas at Pine Bluff, USA</i>	

In today's global economy, products and services are provided across international borders. While the big companies have the ICTT resources to source globally at will, small and medium enterprises (SME) are much less prepared to do so, resulting in a large competitive disadvantage. By contrasting SMEs with their more successful "big brothers," the salient ICTT features are highlighted in system architecture as a checklist for any assistance that might be rendered to SMEs and other entities in overcoming their competitive impediment. These findings are the result of numerous international workshops and conferences held in Hong Kong and in Arkansas in the headquarters of Wal-Mart.

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<i>Magali Dubosson, Haute Ecole de Gestion de Geneve (HEG), Switzerland</i>	
<i>Emmanuel Fragnière, Haute Ecole de Gestion de Geneve (HEG), Switzerland & University of Bath, Switzerland</i>	

This chapter holds the potential to contribute to extending an understanding and management capacity of customer-perceived risks of knowledge-based services. It brings into play a new framework and new risk management process. It also helps with formalizing and making tangible customer added-value.

Chapter 17

Prediction Reliability of Container Terminal Simulation Models: A Before and After Study 315

Armando Carteni, University of Salerno, Italy

In this chapter attention is focused on the container terminal optimization problem, given that today most international cargo is transported through seaports and on containerized vessels. In this context, in order to manage a container terminal it is sometimes necessary to develop a Decision Support System (DSS). This chapter investigated the prediction reliability of container terminal simulation models (DSS), through a before and after analysis, taking advantage of some significant investment made by the Salerno Container Terminal (Italy) between 2003 and 2008.

Chapter 18

New Profession Development: The Case for the Business Process Engineer 336

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This chapter argues that an obstacle to business process (re)engineering is the lack of a business process engineer role with an associated professional education, tools, and community. There is an urgent need for a professional business process engineer. In the chapter, it is discussed the skills required of this profession and a first course offered at a university on this subject is briefly described.

Chapter 19

Logistics Services in the 21st Century: Supply Chain Integration and Service Architecture..... 359

Marcus Thiell, The Universidad de los Andes, Columbia

Sergio Hernandez, The Universidad de los Andes, Columbia

The dynamics of change and the path-dependent evolution of resources and capabilities are central concerns of contemporary strategic management. Companies tend to concentrate scarce resources into their core competences. Opportunity, speed, product choices and availability are intangibles that customer value, some times more than the price.

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