

Igor Ilin · Carlos Jahn · Andrea Tick
Editors

Digital Technologies in Logistics and Infrastructure

 Springer

Contents

Methods of Recognition and Classification of Objects in Digital Logistics	1
Igor Anantchenko, Tatiana Zudilova, Sergei Ivanov, Nikita Osipov, and Irina Osetrova	
Prospects and Opportunities for Green Logistics Development in Russia	15
Vladimir Kobzev, Maxim Izmaylov, and Abdelwahab Mahmoud Nagaty	
Ice Reconnaissance Data Processing Under Low Quality Source Images	25
Andrey Timofeev, Aleksander Titov, and Denis Groznov	
Assessment of the Impact of the Level of Railway Tariffs on the Evolution of Cargo Supply Chains	35
Yuriy Egorov	
Stochastic Operational Logic for Berths Throughput Modelling of Export Coal Terminal	46
Nikolay Kuptsov and Alexander Kuznetsov	
New Approaches to the Economic Assessment of Transport Projects in the Context of Changing Urban Mobility	59
Elena Volkova	
Digitalization and Data Driven Logistics at Dutch Logistic SMEs	68
K. M. Paardenkooper	
Conventional and Digital Technologies Convergence as an Additional Advantage in Ensuring of Supply Chain Counterparties Economic Growth	79
Ilia Gulyi	

Development of Rail Container Transportation Based on Mobility and Logistics Efficiency	88
Liana Chechenova	
Two-Level Algorithms as Part of Digital Logistics Platforms	102
Sergey Sergeev, Sergey Krasnov, Vladimir Bakharev, and Elizaveta Tereshchenko	
Digitalization of Oil Refining Process (Fuel Gas Flow Rate for Hydrotreatment)	112
Valentin Nikonorov, Igor Ilin, Aleksandr Titov, and Andrey Timofeev	
Prospects of Multimodal Container Transportation in Russia	121
Oleg Izotov	
Application of Digital Twins for Digital Transformation of Oil and Gas Enterprises	129
Anastasia Levina, Sofia Kalyazina, Daria Levaniuk, and Andrey Zaitsev	
The Use of Unmanned Aerial Vehicles in Healthcare Logistic: Risks and Opportunities	138
Victoria Iliashenko, Oksana Iliashenko, Maksim Ivanov, Ekaterina Lukianchenko, and Yekaterina Kovaleva	
Improvement of Information and Communication Activities of Participants in Supply Chains Using Corporate Portals	150
Olga Rostova, Svetlana Shirokova, Anastasia Khrykova, and Anastasiia Shmeleva	
Decision Aid Digital Instrument Within Arctic Maritime Logistics During Polar Night	163
Valery M Abramov, Igor Sikarev, Sergey Lukyanov, Ekaterina Rumiantceva, Alexander Chusov, and Oksana Petrieva	
Using Digital Solutions in Railway Logistics: The Experience of Medium-Sized Businesses	171
Alexander Faustov, Olga Chemeris, and Kristian Halada	
Implementing Multi-agent System for Dispatch and Control of Emergency Medical Care Ambulances to Enhance Emergency Response Effectiveness and Quality in Saint-Petersburg	183
Victoria Iliashenko, Ekaterina Lukianchenko, Artyom Zheleznyak, and Nadia Lohyeeta	
Modelling the Berths Throughput of Export Coal Terminal with Stochastic Methods	198
Nikolay Kuptsov and Alexander Kuznetsov	
Evolution of Supply Chains in the New Digital Reality	210
Evgenii Artemenko and Elizaveta Tereshchenko	

The Significance of the Economic and Human Potential of the Yamalo-Nenets Autonomous Okrug for the Scenario Development of the Russian Arctic 222
 Dmitry Skipin, Yulia Yukhtanova, Tatiana Koltsova, Oksana Lazareva, and Djamilia Skripnuk

Artificial Intelligence in Aviation Industry 233
 Daniil Ivanov, Ekaterina Pelipenko, Alena Ershova, and Andrea Tick

Data Management in the Offshore Wind Farm System 246
 Nikolay Didenko, Djamilia Skripnuk, Sergei Kulik, and Natalia Anosova

Effective Management of Multimodal Logistics in Russia 264
 Anastasia Levina, Konstantin Frolov, Nina Trifonova, and Andrea Tick

Arctic Port Activity Management Digitalization in Ice Season 273
 Valery M. Abramov, Christiane Schmuilius, Sergey Lukyanov, George Gogoberidze, Alexandra Borremans, and Oksana Petrieva

Usage of IT Solutions by the Members of the Supply Chains on the Example of Pharmaceutical Market 281
 Svetlana Shirokova, Anastasiia Prosvirnina, Olga Rostova, and Hussam N. Fakhouri

In-Store Personal Navigation and Dynamic Pricing 289
 Elizaveta Pliushch, Irina Ponomarenko, Dayana Gugutishvili, and József Tick

Digitalization of Corporate Logistics Processes in the Architecture of Large Industrial Enterprises 298
 Alexey Anisiforov, Sofia Kalyazina, and Elizaveta Tereshchenko

The Architecture of IT Services of an Oil Refinery Information Systems 309
 Igor Ilin, Nikolay Koronotov, Alissa Dubgorn, and Polina Rukina

Author Index 319