

Jahn, Carlos (Ed.); Kersten, Wolfgang (Ed.); Ringle, Christian M. (Ed.)

Proceedings

Adapting to the Future: Maritime and City Logistics in the Context of Digitalization and Sustainability

Proceedings of the Hamburg International Conference of Logistics (HICL), No. 32

Provided in Cooperation with:

Hamburg University of Technology (TUHH), Institute of Business Logistics and General Management

Suggested Citation: Jahn, Carlos (Ed.); Kersten, Wolfgang (Ed.); Ringle, Christian M. (Ed.) (2021) : Adapting to the Future: Maritime and City Logistics in the Context of Digitalization and Sustainability, Proceedings of the Hamburg International Conference of Logistics (HICL), No. 32, ISBN 978-3-7549-2771-7, epubli GmbH, Berlin, <https://doi.org/10.15480/882.3948.2>

This Version is available at:

<http://hdl.handle.net/10419/249609>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by-sa/4.0/>

HICL

HICL PROCEEDINGS

Editors: Kersten, W., Blecker, T., Ringle, C.M. and Jahn, C. 2020

Data science and innovation in supply chain management: how data transforms the value chain.

ISBN: 978-3-753123-46-2

Data science in maritime and city logistics: data-driven solutions for logistics and sustainability.

ISBN: 978-3-753123-47-9

Editors: Kersten, W., Blecker, T., Ringle, C.M. and Jahn, C. 2019

Artificial Intelligence and Digital Transformation in Supply Chain Management.

ISBN: 978-3-750249-47-9

Digital Transformation in Maritime and City Logistics.

ISBN: 978-3-750249-49-3

Editors: Kersten, W., Blecker, T., Ringle, C.M. and Jahn, C. 2018

The Road to a Digitalized Supply Chain Management.

ISBN: 978-3-746765-35-8

Logistics 4.0 and Sustainable Supply Chain Management.

ISBN: 978-3-746765-36-5

Editors: Kersten, W., Blecker, T., Ringle, C.M. and Jahn, C. 2017

Digitalization in Supply Chain Management and Logistics.

ISBN 978-3-7450-4328-0

Digitalization in Maritime Logistics and Sustainable Supply Chain Management.

ISBN 978-3-7450-4332-7

...find more proceedings on hicl.org/publications

Adapting to the Future: Maritime and City Logistics in the Context of Digitalization and Sustainability

Prof. Dr-Ing. Carlos Jahn
Prof. Dr. Dr. h. c. Wolfgang Kersten
Prof. Dr. Christian M. Ringle
(Editors)

The contents of this book are licensed under the Creative Commons Attribution-ShareAlike 4.0 International License. To view a copy of this license, visit <https://creativecommons.org/licenses/by-sa/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

Edition	1st edition, September 2021
Publisher	epubli GmbH, Berlin, www.epubli.de
Editors	Carlos Jahn, Wolfgang Kersten and Christian M. Ringle

Cover design	Beverly Grafe
Cover photo	Photo by Moritz Kindler on Unsplash
Layout	Theresa Schludi, Beverly Grafe and Martin Brylowski

ISBN	978-3-754927-71-7
ISSN (print)	2635-4430
ISSN (online)	2365-5070

Preface

Digitalization and sustainability continue to shape the industrial and scientific world opening new opportunities across a wide range of sectors. Data science is considered a key driver of digitalization that has the potential to introduce new sources of growth. The recent advances in business analytics and machine learning have created a whole new business ecosystem.

This year's edition of the HICL proceedings complements the last year's volume – Data science in maritime and city logistics: data-driven solutions for logistics and sustainability. All entities along the supply chain are challenged to adapt new business models, techniques and processes to enable a smooth transition into an innovative supply chain.

This book focuses on core topics of adapting to the future in logistics. It contains manuscripts by international authors providing comprehensive insights into topics such as Maritime Logistics, Business Analytics, Port Logistics or Sustainability and offers future research opportunities in the field of supply chain management.

We would like to thank the authors for their excellent contributions, which advance the logistics research process. Without their support and hard work, the creation of this volume would not have been possible.

Hamburg, September 2021

Prof. Dr-Ing. Carlos Jahn
Prof. Dr. Dr. h. c. Wolfgang Kersten
Prof. Dr. Christian M. Ringle

Table of Contents

I. City Logistics 11

Urban Fulfillment Centers – Perceptions and Expectations from Retailers 13

Marike Kellermayr-Scheucher, Maria Niedermeier, Patrick Brandtner and Oliver Schauer

New Opportunities for Smart Urban Logistics - Results of a Field Study 37

Stephan Seeck and Maximilian Engelhardt

Accepting a crowdsourced delivery - a choice-based conjoint analysis 65

Henrik Bathke and Evi Hartmann

Sustainable Public Transportation using Markov Chains: Case Study Hamburg
Public Transportation 97

Majid Sodachi and Omid Fatahi Valilai

Enabling Decentralized Transshipment in Waterborne Container
Transportation137

Cyril Alias¹, Helmut Broß¹, Jonas zum Felde¹ and Dieter Gründer

Investigating the Return Cost for B2C e-commerce169

Arianna Seghezzi¹, Chiara Siragusa¹, Angela Tumino¹ and Riccardo Mangiaracina

Requirements for robots in combined passenger/freight transport195

Marko Thiel, Sandra Tjaden, Manuel Schrick, Kerstin Rosenberger and Matthias Grote

II. HICL and Practice - Excellence in Logistics and Supply Chain Management217

Robotic Process Automation in Logistics: Implementation Model and Factors
of Success219

Jan Krakau, Carsten Feldmann and Victor Kaupe

An Approach to Analyzing Shippers' Transportation Management	259
<i>Tim Brilka and Uwe Clausen</i>	
Barriers to the implementation of 4PL in developing countries	291
<i>Mujthaba Ahtamad and Medet Akhsanov</i>	
Efficiency measurement of grocery retail warehouses with DEA	317
<i>Andreas Gafner, Dominic Loske and Matthias Klumpp</i>	
Evaluation of an Integrated Planning and Simulation Tool	351
<i>Stephan Krüger, Anne Schwientek and Carlos Jahn</i>	
III. Maritime Logistics	373
Fuzzy-based decision analysis on Arctic transportation: A guidance for freight shipping companies	375
<i>Lukas Benz, Christopher Münch and Evi Hartmann</i>	
Digital Logistics as a Perspective for the Northern Sea Route	403
<i>Igor Ilin, Svetlana Maydanova, Carlos Jahn, Jürgen Weigell and Wolfgang Kersten</i>	
IV. Port Logistics	425
Assessing Performance of Container Slot Allocation Heuristics	427
<i>Marvin Kastner, Malte Peters and Carlos Jahn</i>	
Gantry Crane Scheduling and Storage Techniques in Rail-Road Terminals ..	457
<i>Chiraag Dinesh Kaidabettu, Ann-Kathrin Lange and Carlos Jahn</i>	
V. Sustainability	495
Sustainability: The Italian Case of Eco-Sustainable Contract	497
<i>Ettore-William Di-Mauro</i>	

Supply Chain Management in the Course of Time – A Systematisation of Past, Present and Future Objectives	519
<i>Anna-Maria Nitsche, Wibke Kusturica, Denis Neumann, Christian-Andreas Schumann and Christoph Laroque</i>	
Ecological Sustainable Physical Distribution	547
<i>Bastian Mrutzek, Herbert Kotzab and André Milosch</i>	
Assessing the impact of B2C e-commerce in the apparel industry: a logistics perspective.....	571
<i>Chiara Siragusa, Arianna Seghezzi, Angela Tumino and Riccardo Mangiaracina</i>	
Literature Review of Installation Logistics for Floating Offshore Wind Turbines	599
<i>Jürgen Weigell¹ and Carlos Jahn</i>	