

<https://doi.org/10.7250/CONNECT.2025.082>

FACILITATING REGIONAL INNOVATION THROUGH SUSTAINABLE AND MULTIMODAL TRANSPORT SOLUTIONS: THE CASE OF LITHUANIAN COUNTRYWIDE COLLECTIVE APPROACH

Christopher MEYER^{1*}, Laima GERLITZ²

^{1,2} Hochschule Wismar – University of Applied Sciences: Technology, Business and Design, Philipp-Müller-Str. 14, 23966 Wismar, Germany

* **Corresponding author.** E-mail address: christopher.meyer@hs-wismar.de

Abstract – New EU Industrial Policy based on circular economy principles and the European Green Deal as the New EU Growth Strategy serve as key roadmaps. Environmental responsibility and digital efficiency – Europe’s twin to a green and digital economy – paves the way for Small and Medium-Sized Ports (SMSPs) to improve innovation capacity, upgrade demanded future skills and competencies, accelerate EU policies compliant with operational, environmental, legal, digital, social and market performance for regional innovation and thus regional development. By building upon use case scenarios of strategic and collective approaches for Lithuanian sea and inland waterways ports, the paper showcases how SMSPs can enable sustainable transportation through transferable sustainable electrification and multimodal connectivity and sectoral integrity solutions. Indeed, collective and collaborative approaches among national SMSPs improves regional and national innovation development. Based on the role model – Baltic Sea Region – Lithuania’s increase in logistical performance was ranked second among all littoral states. Illustrated use case scenarios of affected Lithuanian SMSPs reveal how ports are capable to kick-start sustainable transportation contributing to regional innovation with quantified and qualified solutions on Onshore Power Supply (OPS), electrification and digitalisation of port operations through Internet of Things (IoT) and Blockchain solutions used for transport and monitoring operations.

Keywords – *Inland ports; Lithuanian waterways; small and medium-sized ports; seaports; regional development; regional innovation*