In times of a recent breakout of a new virus COVID-19, the topics of change in physical and social interactions and trading structures, importance of intertwining physical and virtual worlds as well as an eager search for new digital business models are on priority lists of many actors. Its effects and exacerbation of the economy is felt around the globe, despite any difference in region, size of economy or production structure of economies. In particular, in face of COVID-19, a large blow is apparent in the services sector.

One of the key challenges related to the threat posed by the global coronavirus pandemic is to preserve many jobs and protect staff working in order to continue port operations and keep ports open for ship calls. This is crucial for the EU and European ports, since 75% of the EU external trade and 30% of intra-EU transport goods are moved by waterborne transport. As a response to the global lockdown and vulnerability of global supply chains, several international organisations and maritime ports networks shortlist measures necessary to keep severe affects of the lockdown away or reduce them to any possible minimum. One of key measures is to limit physical interactions. In this particular context, the use and higher deployment of digital technologies, such as digital documentation, tracing information systems, digital group-working platforms, Blockchain and data-enabling systems become a core element maintaining the uninterrupted flows of goods and services at ports.

Technological platforms are expanding into different aspects of our daily life. One of the most critical challenges that the transportation and logistics industry is facing is how to move people and cargo safely and efficiently. Access to real-time data is crucial for companies to determine how to improve operational efficiency and performance. With tailor made Internet of
Things (IoT) or Industry 4.0 solutions, transportation and logistics enterprises connect devices to accelerate productivity. As a result, connected vehicles and traffic management centres make transportation more secure, improve safety and traffic flow, and reduce costs for greater scale.

In pursuit of these goals, the research paper in hand addresses this situation for small and medium-sized ports in the Baltic Sea as critical actors of the ecosystem. Given the topicality of this research and taking the research gap into account, the authors display a conceptual capacity building framework for port employees. This framework is based on the empirical insights: primary and secondary data collected during the project “Connect2SmallPorts”, part-financed by the Interreg South Baltic Programme 2014–2020 from the European Regional Development Fund (ERDF). The conceptual framework is a practical training programme dedicated to fill in missing skills or expand limited human resources’ competences and ports’ capacity when adapting or advancing digitalisation in ports’ ecosystems. In particular, specific organisational areas of capacity building are addressed and individual solutions suggested, such as for management, administration, logistics and marketing. In face of the coronavirus and stronger need to switch to digital services, the research highlights the conceptual training framework as an online and distance training tool showing opportunities to upgrade ports and their infrastructure in terms of safety and security with the Blockchain technology; to advance transportation, environmental and economic performance with the improved digitalisation. For this purpose, the researchers use action research and deploys concepts and approaches from the management field, such as absorptive capacity construct, organisational learning, transformation, resourced-based view and dynamic capabilities concept included in the ecosystem discourse and linked with open innovation and service design. The present research provides both theoretical and practical contributions, where the affected stakeholders can test and utilise the developed tool as well as transfer it to other regions.