GREEN PORTS WEBINAR SERIES #11
Smart Ports: Digitalization, Data Integration, and Intelligent Operations

Thursday, 17 September 2026 | 2:00-3:00 PM GMT+8
Registration link: https://adb-org.zoom.us/webinar/register/WN_S7hy9ZK4Tuuld_wLyvK7iw

Modern maritime trade is increasingly defined by the ability to move information as efficiently as cargo. As global supply chains become more interconnected, smart port approaches are gaining importance as a means of improving the efficiency, resilience, and sustainability of port operations. Rather than relying solely on physical infrastructure expansion, smart ports use digitalization, data integration, and advanced technologies to improve the performance of existing facilities and systems.

Many port operators manage large volumes of data across separate systems. Vessel scheduling, gate operations, cargo movements, and environmental monitoring may be managed independently, resulting in data silos that limit visibility across port operations. These gaps can contribute to longer dwell times, inefficient fuel use, and missed opportunities for predictive maintenance and operational planning.

The transition to smarter port operations involves more than the adoption of new software. It requires an integrated approach to data governance, Internet of Things (IoT) connectivity, and artificial intelligence (AI). By improving data exchange among stakeholders, including shipping lines, trucking companies, terminal operators, customs authorities, and other government agencies, ports can strengthen:

- Real-Time visibility: Tracking cargo, vessels, and other assets more accurately to identify and address operational bottlenecks.
- Intelligent optimization: Using data analytics and AI-supported tools to anticipate berth congestion, improve yard planning, and optimize cargo movements.
- Sustainability: Monitoring emissions, energy use, and other environmental indicators to support more efficient and lower-carbon port operations.
- Resilience: Strengthening operational continuity and responsiveness to cyber incidents, supply chain disruptions, and other shocks through robust digital systems and protocols.

For Southeast Asia, digitalization can support more efficient and competitive port systems and facilitate smoother trade across the region. Greater integration of Port Community Systems (PCS), Single Window initiatives, and other digital platforms can improve coordination and information exchange across port and trade processes. However, ports face different starting points and constraints, including varying levels of digital capacity, cybersecurity risks, interoperability challenges, and the cost of upgrading legacy systems and infrastructure.

This webinar will bring together digital logistics experts, port practitioners, and maritime policymakers to discuss the transition from traditional to smarter port operations. The session will highlight practical approaches to data integration and digital transformation, including examples of data-sharing frameworks and the use of intelligent sensors and other digital technologies in different port contexts.

Session Objectives

- Identify the core components of a smart port and key stages of digital transformation.
- Assess tools and approaches for data integration, including application programming interfaces (APIs), IoT sensors, and cloud-based management platforms.
- Understand how phased and incremental digitalization can deliver near-term operational improvements while supporting longer-term strategic goals.

This webinar is the eleventh in the Green Ports Webinar series, which highlights how leading ports are addressing environmental challenges and how these approaches can be adapted across Southeast Asia. It is organized by the ASEAN Catalytic Green Finance Facility (ACGF), which is managed by the ASEAN Power Grid and Special Funds Unit of ADB's Southeast Asia Regional Department. It is hosted by ADB's Southeast Asia Development Solutions (SEADS) platform and Development Asia.

ACGF is an ASEAN Infrastructure Fund initiative that supports governments in Southeast Asia to prepare and finance infrastructure projects that advance environmental sustainability and strengthen climate resilience. ACGF is owned by ASEAN governments and ADB.

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AGENDA

Time	Topic & Speaker
3 minutes	**Welcome and Brief Overview** *Jackie Spiteri, SESG Managing Director and ADB Consultant*
	Panel Presentations:
10 minutes	**From Ports to Platforms: PPA's Digital Transformation Journey** *Josephine Napiere, Manager, Port Operations and Services Department, Philippine Ports Authority (PPA)* The session will explore the Philippine Port Authority's (PPA) transition from traditional processes to a more integrated, technology-driven port environment. The presentation highlights PPA's key digitalization initiatives and platforms that streamline transactions, strengthen operational monitoring, enable data-driven decision-making, and improve service delivery, paving the way toward a smarter, more connected, and future-ready port.
10 minutes	**Solving the Spreadsheet Conundrum: Building Reliable Sustainability Data** *Lachlan Higgins, Software Stack Developer, SESG* Sustainability data is messy by nature. It comes from multiple handlers, multiple entry points, and often lives across a maze of spreadsheets, invoices, and disconnected systems, long before anyone gets to reporting on it. This session will highlight practical lessons from building KubeNest, SESG's sustainability data platform, including real case studies from ports and other operators. He'll cover how AI tools can support data cleaning and extraction from large volumes of invoicing, why testing and verification of extracted data is critical, and what it takes to convert raw energy and waste data into accurate emissions and ESG reporting. This is a practical look at the data challenges behind sustainability reporting, and what's involved in getting to data that's structured, reliable and something that can actually see and trust.
10 minutes	**Doing More with Less: Scalable Tech for Smarter, Leaner, and Greener Ports** *Cofano Software Solutions Asia* The session explores regional gateways that can modernize operations and support sustainability goals. Rather than relying on costly, large-scale system upgrades, the

	discussion will highlight how accessible digital tools and intelligent coordination can streamline everyday workflows. Focused on three core pillars—smarter connectivity across networks, leaner operations that cut bottlenecks and delays, and greener practices that reduce waste and emissions—this presentation will share an agile, step-by-step approach to building more resilient, efficient, and future-ready port ecosystems.
10 minutes	**Moderated Discussion** *Facilitated by Jackie Spiteri, SESG Managing Director and ADB Consultant*
2 minutes	**Closing** *Jackie Spiteri, SESG Managing Director and ADB Consultant*

Biographies

 **Josephine Napiere** Manager, Port Operations and Services Department, Philippine Ports Authority	Josephine Napiere currently serves as the Department Manager of the Port Operations and Services Department at the Philippine Ports Authority (PPA). She brings over 20 years of extensive experience in commercial policy, port operations, and public sector governance within PPA. Throughout her career, Josephine has held key leadership positions in the PPA's Commercial Services Department, where she managed areas including private ports, port pricing, investment promotion, and asset management. She has also represented the PPA in significant trade negotiations under ASEAN and the Regional Comprehensive Economic Partnership (RCEP), specializing in ports and logistics services.
 **Lachlan Higgins** Software Stack Developer, SESG	Lachlan Higgins is a Full Stack Software Developer at SESG. He holds a Bachelor of Software Engineering (Honours Class I) from the University of Newcastle. Lachlan is a core developer of KubeNest, SESG's sustainability reporting platform, which helps organisations track and report on their carbon footprint and broader ESG performance. He has also led development of SESG's climate risk tool, which turns complex global climate data into clear, region-specific risk insights for clients, and is the primary developer of the Green Ports Toolkit, an online platform built for the Asian Development Bank to help port administrators across the Asia-Pacific region access practical guidance and case studies on sustainable port operations. Alongside his technical work, Lachlan works closely with clients and stakeholders, running demos, gathering feedback, and providing training and support.
Cofano Software Solutions Asia	*To follow*

 **Jackie Spiteri** *Managing Director, SESG*	Jackie Spiteri is an experienced sustainability professional with over 18 years in the maritime and infrastructure sectors. She is the Founder and Managing Director of SESG, a specialist advisory firm helping organisations navigate the evolving sustainability and reporting landscape through tailored strategies, implementation, and education. Jackie has served in leadership roles including Board Member of PIANC ANZ and Chair of Ports Australia's Environment Planning and Sustainability Working Group. She is also an accredited Lead Auditor and the only Green Marine verifier in the Asia–Pacific region. Her career highlights include developing sustainability financing frameworks enabling over $750 million in linked debt, contributing to the ASEAN Taxonomy V3 and ongoing work on V4, and leading the creation of KubeNest, an innovative sustainability software platform.