



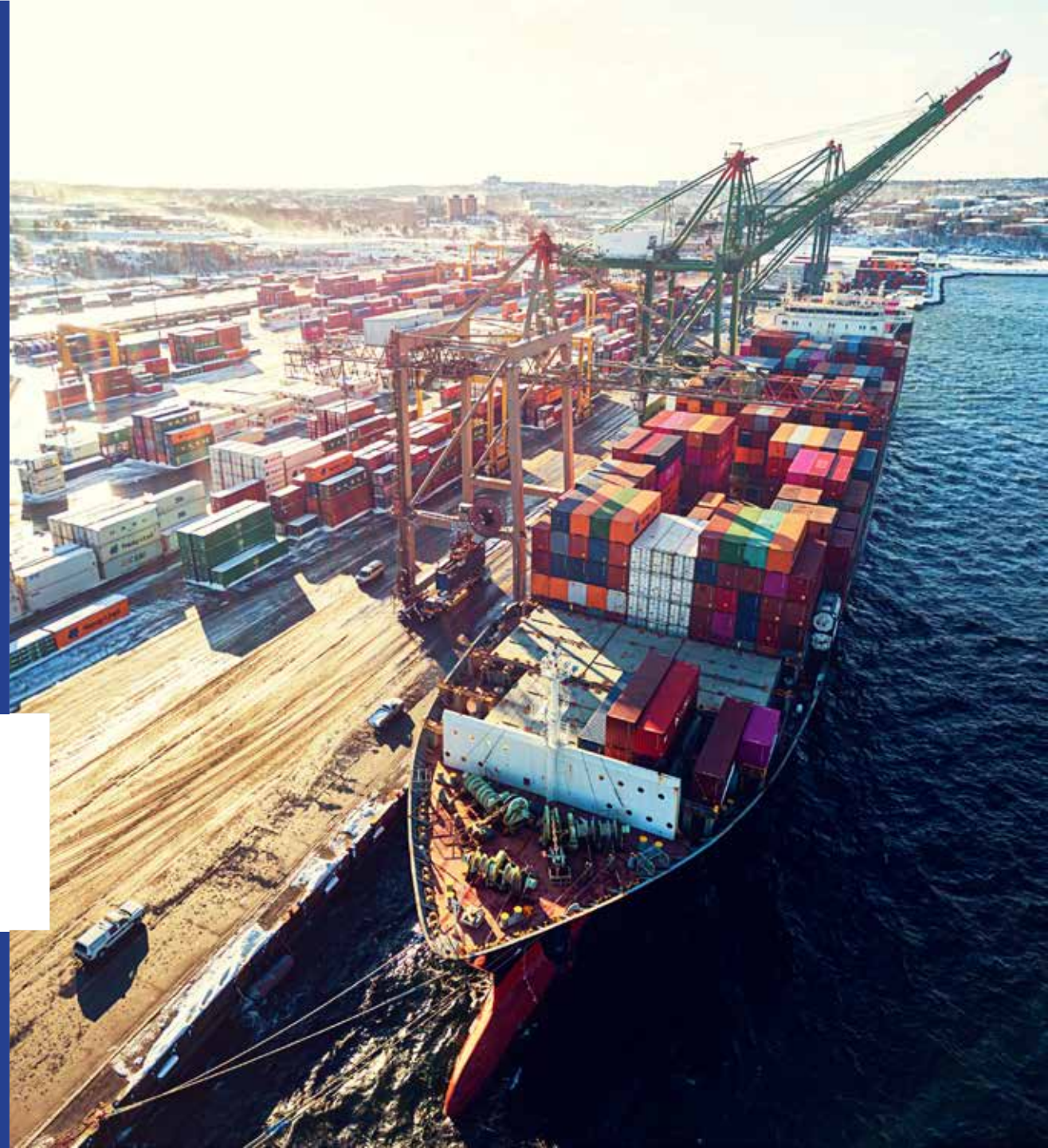
Project
Leaders

All Aboard! Navigating the Complex and Changing Future of Port Developments Together

2024 APP Winter Conference

Date: January 25, 2024

Presented by: Captain Jamie Marshall



Agenda

01 Introduction

02 What are the Challenges?

03 What are the solutions for the future?

Land Acknowledgement

Colliers Project Leaders has offices across Canada. We acknowledge that our work takes place within ancestral, traditional, treaty and unceded territories which continue to be home to many First Nations and Indigenous people.

We continue to benefit from our presence on these lands and are committed to Reconciliation.

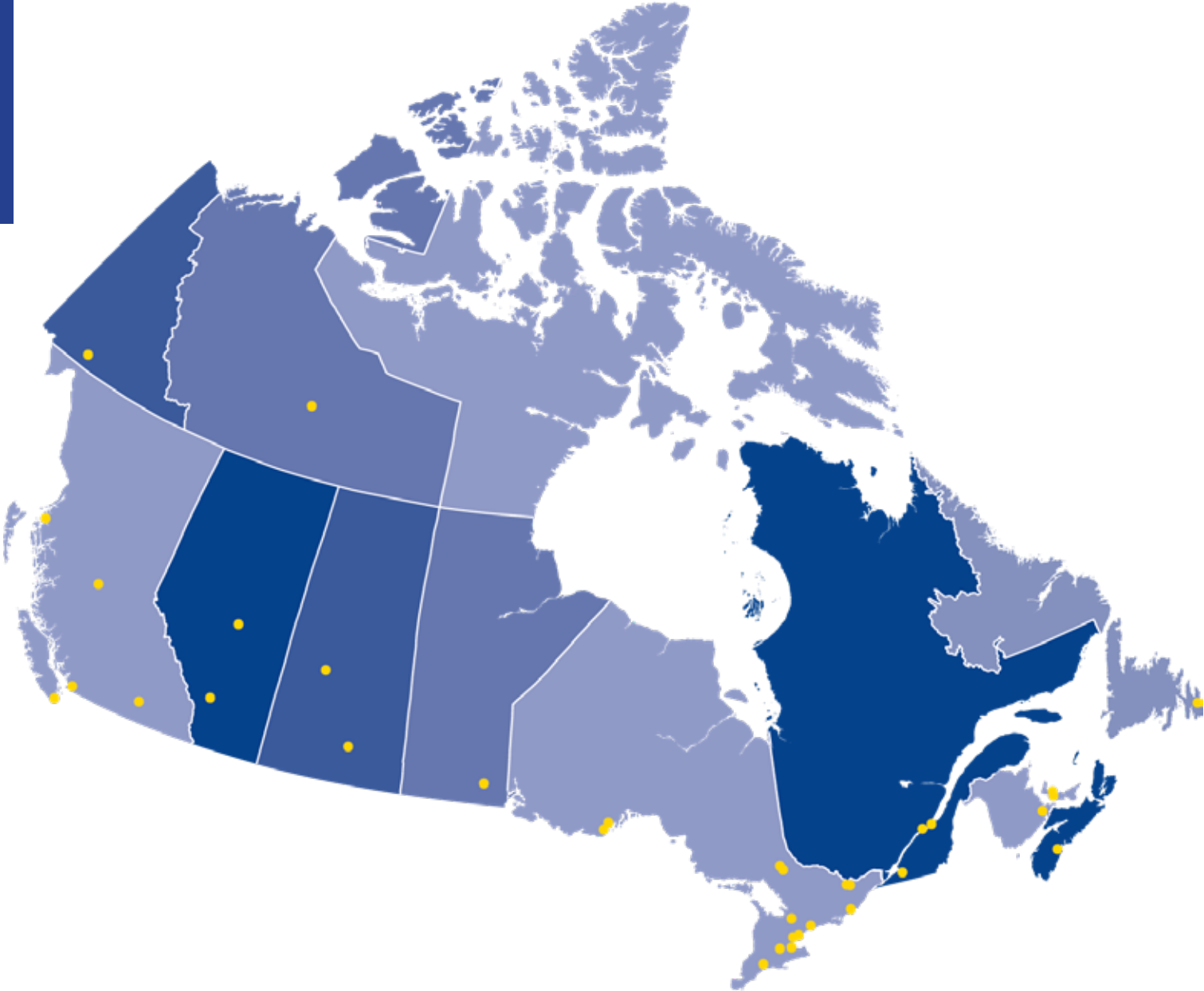
Colliers Project Leaders Where we are

30+ offices
across Canada

17,000+
public and private
sector projects

ISO
9001:2015

30+
years of service



What we do

Our core services

Project Management	Construction Solutions	Furniture, Equipment Planning and Move Readiness	Infrastructure Advisory	IPD and Lean
Exceptional project leadership with experts on the client's side across all stages of the project	Construction expertise from the beginning of the project to enable informed and timely decisions on design, constructability, and cost	Comprehensive equipment solutions from specifications and procurement to delivery and installation	Strategic advisory services to reduce cost, manage risk, address complex challenges, and achieve sustainable strategies	Expert Integrated Project Delivery (IPD) and Lean services to guide IPD teams and advocate for projects

Projects

Halifax Ferries

Seaspan Shipyards

Montreal Contrecoeur Terminal Expansion

Roberts Bank Terminal Two



An aerial photograph of a large port facility, likely the Port of Vancouver. The image shows a complex of infrastructure including a multi-lane highway with several overpasses, a set of rail tracks running parallel to the highway, and a vast container yard filled with colorful shipping containers. In the background, a large body of water (the ocean) is visible under a cloudy sky, with distant mountains on the horizon. The foreground shows a body of water reflecting the sky and clouds. A blue rectangular graphic element is positioned in the lower-left corner, partially overlapping the white text box.

The Challenges

Where is the future? Automation

- Potential labour displacement
- Integration of technologies
- Unclear reliability of machinery



Where is the future?

Autonomous Vessels

- Safety, efficiency, and regulatory considerations
- Ship/Shore Interface
- Reliability of Sensors/Autonomous systems



Where is the future?

Cybersecurity in Ports

- Cyber threats and attacks
- Software and hardware upgrades
- Human error



Where is the future?

Digitization in Supply Chain

- Integration and interoperability of digital technologies
- Data security and privacy
- Cost of implementation



Where is the future?

Global Connectivity

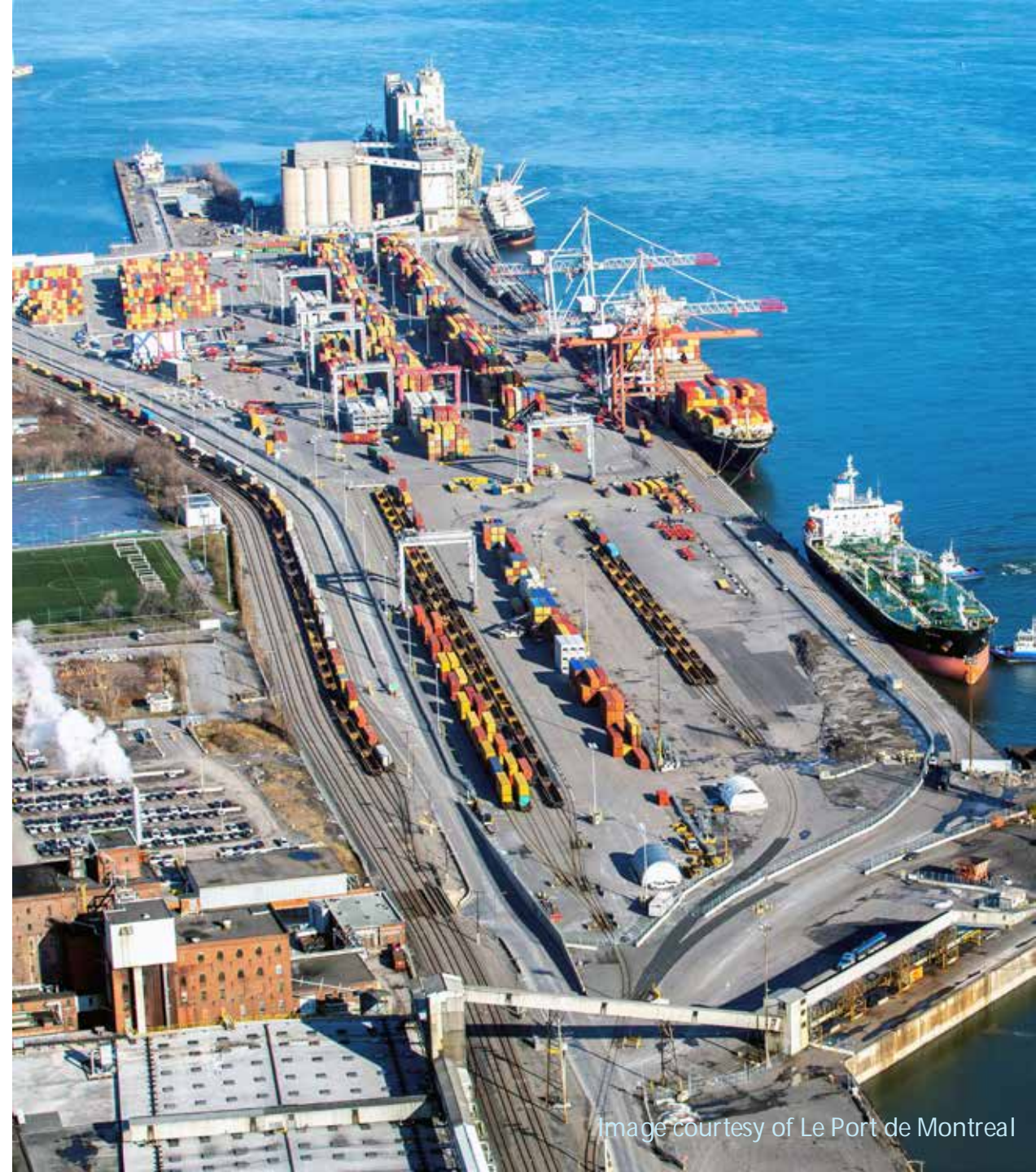
- Seamless communication across diverse technologies
- Global partnerships and collaboration
- Efficient coordination of all port activity components



Where is the future?

Infrastructure Upgrades

- Optimizing Port for larger vessels
- Increasing capacity to manage trade volumes
- Escalating capital costs



Where is the future?

Regulatory

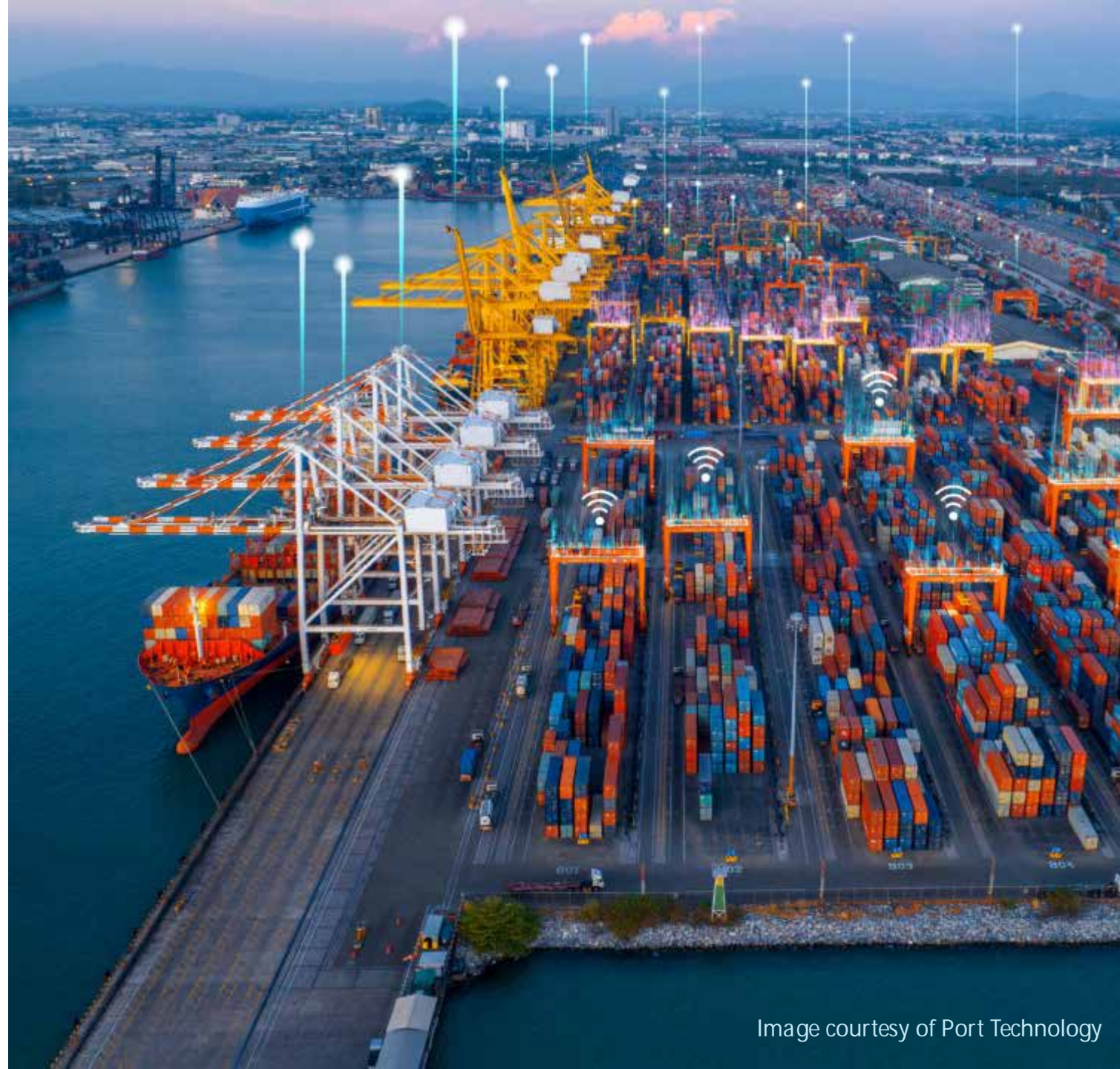
- Ever-changing regulations
- Interpretation and application
- Conflicts of different regulatory frameworks



Where is the future?

Smart Port Technologies

- Adapting existing infrastructure and legacy systems
- Resistance to change
- Standardization



Where is the future?

Sustainable Port Practices

- Electrification of shore power
- Provision of alternative fuels
- Reduction of ecological footprint of ports



Interactive Table Sessions

Here's how.....

- Work at your tables for 10 mins
- Based on your Topic, outline the solutions to one of the challenges that have been identified at your table
- Assign a scribe to capture your innovative solutions and a speaker to present to the group
- Report back to the group in less than 2 mins

Together we can
create a vision for the
Ports of the Future.



What are the
Solutions?

Thank you

Let's stay in
touch

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