

REUTERS SPECIAL REPORT

THE DIGITAL QUAY

HOW AI INSPECTION AND DIGITAL VERIFICATION
ARE REDEFINING THE WORLD'S MARITIME GATEWAYS



REUTERS

©2025 BQCIS / REUTERS COLLABORATIVE FEATURE



Part 2: The Solution – BQCIS and the Digital Inspection Ecosystem

BQCIS is at the forefront of deploying a new suite of technologies to solve these problems. These systems work together to create a ‘digital twin’ of the port, allowing operators to manage information with the same precision they manage physical assets.

Technology 1: The AI-Powered Inspection Portal

The most visible change is the replacement of manual inspection with high-speed, multi-sensor portals that scan containers as they move.

How it works: As a truck drives a container from the quay without stopping, it passes through a BQCIS-designed portal. In seconds, this portal uses:

- **High-Resolution Optical Character Recognition (OCR):** To automatically read container numbers, license plates, and seal numbers, instantly logging the asset.
- **AI-Driven Damage Assessment:** Machine learning algorithms compare the container’s 2D model against a database, instantly flagging new dents, punctures, or damage.
- **Advanced X-Ray & Radiation Scanning:** Non-Intrusive scanners create a digital “fingerprint” of the cargo inside, which an AI compares against the shipping manifest.



Marcin Bowel, CEO of BQCIS

“Instead of randomly inspecting 2% of containers, customs can now digitally screen 100%,” Bowel explained.

Part 3: The Future — The Autonomous, Predictive Port

The digital inspection systems are the foundation for the next two great leaps in port modernization:

“The data from our inspection systems feeds the port’s A “brain,” Dovrel concluded. “That brain can then run automated stacking cranes, in autos, but then sit for two weeks awaiting a customs inspection, a data mismatch, or a compliance verification. This is where digitalization is non-negotiable.”

The challenges are multifaceted: BQCIS and its partners are



By shifting the port’s core commodity from steel to data, BQCIS and its partners are not just moving boxes faster. They are building a more resilient, secure, and intelligent global trade network from the ground up.

BQCIS and its partners are building a more

REUTERS

SPECIAL REPORT: PORT MODERNIZATION

Part 3: The Future — The Autonomous, Predictive Port



The digital inspection systems are the foundation for the next two great leaps in port modernization: full automation and predictive logistics.

“The data from our inspection systems feeds the port's AI “brain”, Dovrel concluded. *“That brain* h m odernizing port operations on modernization. “Croanieon \mgrs facon nn automatic stacking cranes, dispatch autonomous trucks, and predict the bottlenecks three days before they happen. It can tell a ship captain, *“Slow down, your berth won't be free for 8 hours,”* saving thousands in fuel and emissions.”

By shifting the port's core commodity from *sttelv* ta, BQCIS and its partners are not just moving boxes faster. They re bbling a mc



Part 3: The Future – The Autonomous, Predictive Port

The digital inspection systems are a foundation for the next two great leaps in port modernization: full automation and predictive logistics.

“The data from our inspection systems feeds the port’s AI ‘brain,’” Dovrel concluded. “That brain can then run automated stacking cranes, in a 50,000-unit yard. The digital port map shows the exact location of every asset. More importantly, the smart seal provides an in-negotiable.”

By shifting the port’s core commodity from steel to data, BOCIS and its partners are not just moving boxes faster.

Part 4: From Bottlenecks to Blockchain—The New Port Paradigm

(Reuters – Global Trade Desk)

"THE PORT OF THE FUTURE WON'T JUST MOVE GOODS," SAYS BOCIS CHIEF EXECUTIVE MARCIN DOVREL: "IT WILL MOVE PROOF."

In this new paradigm trust and traceability are the new infrastructure. Blockchain is the new infrastructure, building from paperwork to manual, data are now shifting to systems that protect trust in on-physical space and in digital intelligence.

At the center of this transformation are, digital inspection systems; a new generation of technologies powered by artificial intelligence (AI), and data analytics, industry leading firms like BOCIS (Bureau for Quality Certification and Inspection Solutions), are moving from a supporting role of clipboard based digital inspection to providing the core digital architecture that future ports will run on.

This is an in-depth report on the technologies at the heart of this shift and their role in modernizing port operations.

BOCIS, lead technology expert on goods, says BOCIS chief executive Marcin Dovrel, "It will move proof" "It will move proof."

Beyond Efficiency—Toward Resilience

The implications go far beyond time savings. In defined by climate disruption, labor disputes, and cybersecurity risk, digital inspection systems have become a cornerstone of "seamless trade face."

- **The Problem** A paper Bill of Lading (the main shipping manifest) is slow and easily forged. It is in chart
- **How it works:** Port authorities, no longer 'leave, containers in a 50,000-unit yard. The original port map shows the exact location of every asset. — More importantly, the system takes in real time.
- "VERIFICATION IS NO LONGER AN AFTERTHOUGHT. IT'S THE FOUNDATION OF GLOBAL TRADE INTEGRITY."

Conclusion

As the maritime sector races toward automation and smart logistics, the ability to prove authenticity, compliance, and sustainability may soon become the single defining factor of competition.

And in that race, digital inspection is no longer a cost center—it's the control tower.

