TMEIC
We drive industry

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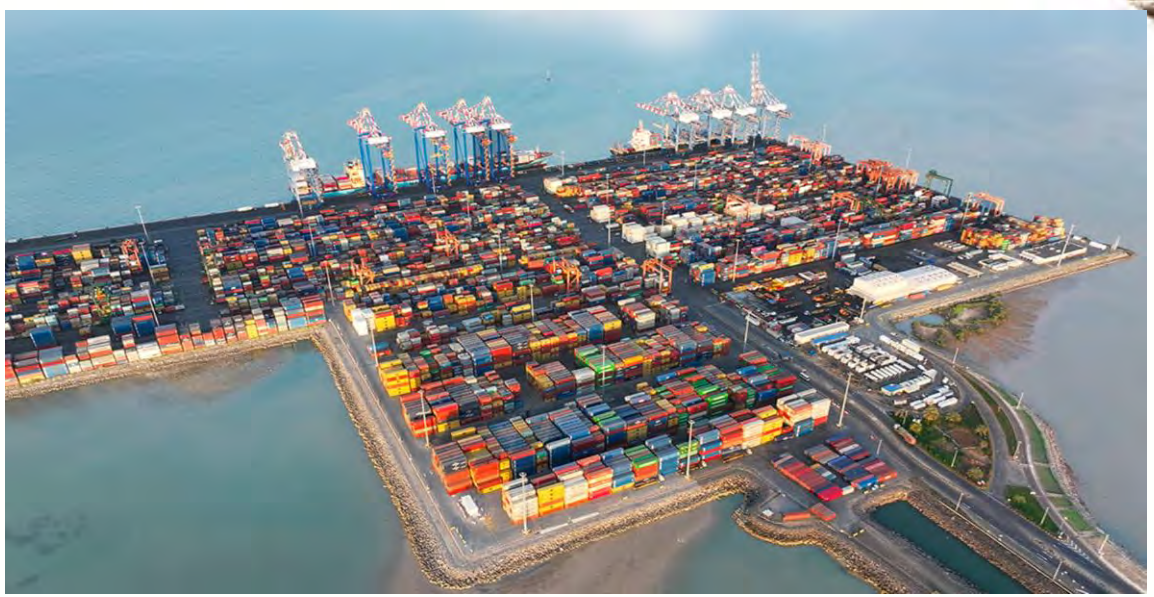
TMEIC Corporation

February 2026



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Daniel Torres

Sales Engineer

Specialized in Port & Terminal Automation Solutions

TOSHIBA + MITSUBISHI ELECTRIC = TMEIC

We drive industry

Cement

Drive and automation systems built to withstand high heat, dust, and heavy loads in cement production.

Learn More →

Metals

The leading force in ferrous and nonferrous metals production

Learn More →

Mining

High-torque motors, drives, and power factor correction systems for hoists, mills, conveyors, and excavators.

Learn More →

Oil & Gas

Reliable motor and drive systems engineered for harsh environments and critical pumping, compression, and refining.

Learn More →

Paper

Integrated systems for moisture-resistant, continuous operation in paper and pulp production lines.

Learn More →

Ports & Terminals

Crane automation, yard control, and electrification solutions for faster, safer, and cleaner port operations.

Learn More →

Renewable Energy

Scalable inverter and energy storage systems for solar, hybrid and grid-tied applications

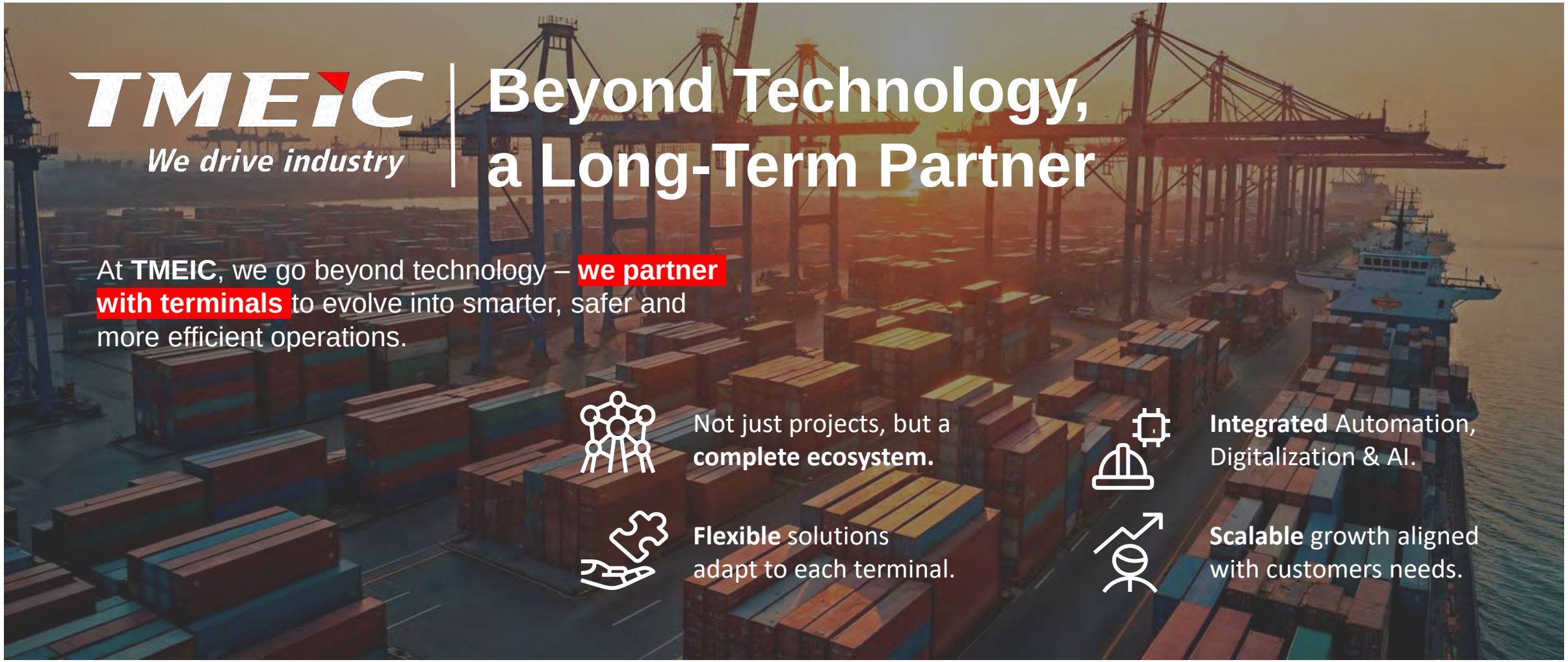
Learn More →

Rubber and Plastics

Medium-voltage drives and motors optimized for mixing, extrusion, and pelletizing processes.

Learn More →

Who we are?


TMEIC
We drive industry
Beyond Technology,
a Long-Term Partner
At TMEIC, we go beyond technology – we partner with terminals to evolve into smarter, safer and more efficient operations.
Not just projects, but a complete ecosystem.
Integrated Automation, Digitalization & AI.
Flexible solutions adapt to each terminal.
Scalable growth aligned with customers needs.

Global leader in terminal automation

20 Years Leading Ports Automation

+50 Terminal Projects Worldwide

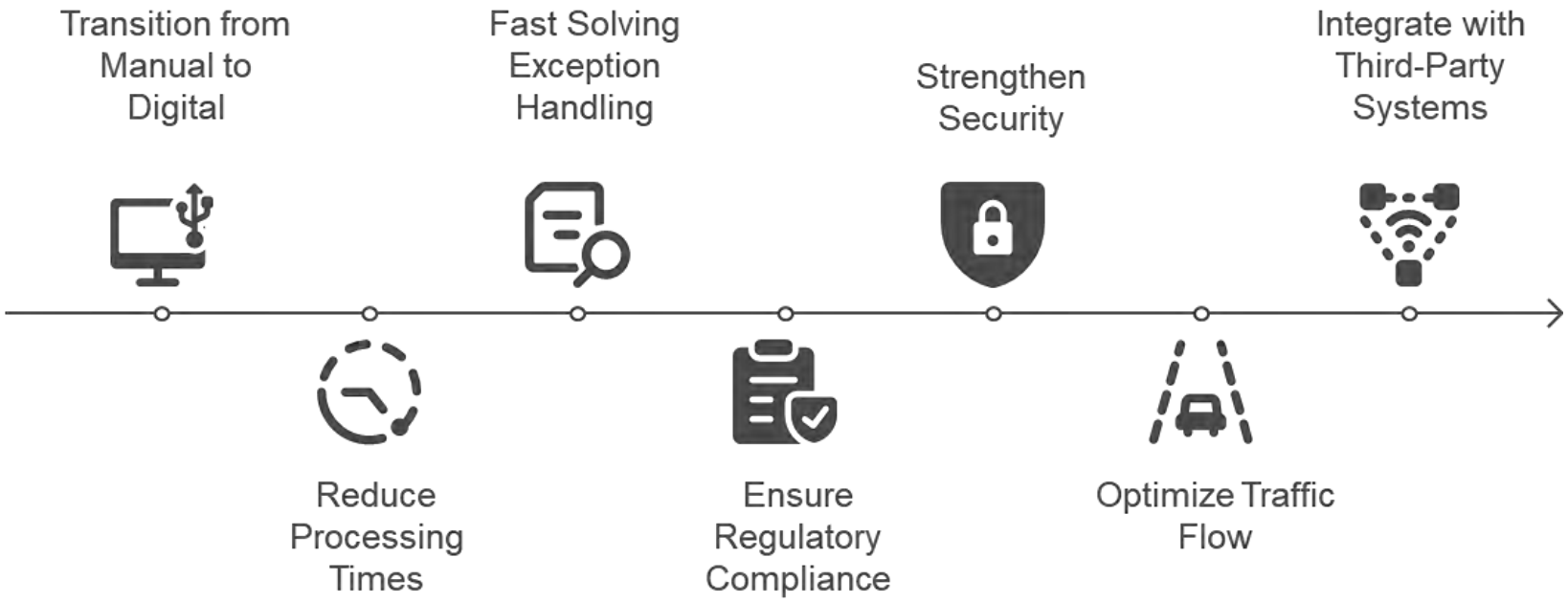
Delivering measurable gains in safety, efficiency, and performance:

- Safety Improvement
- Cost Efficiency

PSA · APM TERMINALS (Lifting Global Trade.) · DP WORLD · CMA CGM

Smart Vision value

The objective of the Smart Vision system is to optimize traffic management and reduce inefficiencies in the flow of vehicles and cargo units entering and exiting the terminal, whether maritime, rail, or inland logistics hubs



Benefits of the Smart Vision

Together, these technologies empower our clients to:

- Improve protecting people at terminals
- Boost efficiency through automation and real-time visibility
- Cut costs and turnaround times with optimized workflows
- Scale operations flexibly to meet growing demand
- Resolve exceptions instantly with digital collaboration
- Eliminate manual errors and reduce risk

How We Deliver It

Smart Vision is not a single product – it is a complete delivery model powered by TMEIC's ecosystem

Engineering	Process Optimization	Customization	Turnkey Projects	Modularity & Scalability
Designing advanced automation solutions that boost performance	Digitalizing terminal processes for maximum efficiency	Tailored solutions for each customer's unique needs.	Complete, ready-to-deploy automation from design to go-live.	Ensuring projects and systems can grow in capacity and functionality with latest technology.

Smart Vision Solutions

From Vision to Data: One Integrated Solution

We bring together the best of automation, AI, and digitalization to transform terminal operations:

- AI-powered vision algorithms
- Real-time data capture & digitalization
- Access Automation
- Advanced software & control solutions
- Seamless TOS integration
- Big Data analytics

Full Terminal Coverage, One Ecosystem

Each module plays a role – but their true value comes from working together under one unified vision.

From Recognition to Understanding

These recognitions apply seamlessly across all operational areas – providing unified visibility and accuracy, everywhere

LPR System
Captures vehicles registration number

DMG Recognition
Detects container's structural damage

TARE Recognition
Container's net weight

CCR
Container's code recognition

CDD
Container's door direction

Max Gross
Container's maximum load

ISO code
Recognizes containers size and codes

Wagon Recognition
Recognizes container codes on railcars

DMG Measurement
Detects and measures container's damage

IMO code
Identifies hazardous pollutants

GENSET
Recognizes freezer units on containers

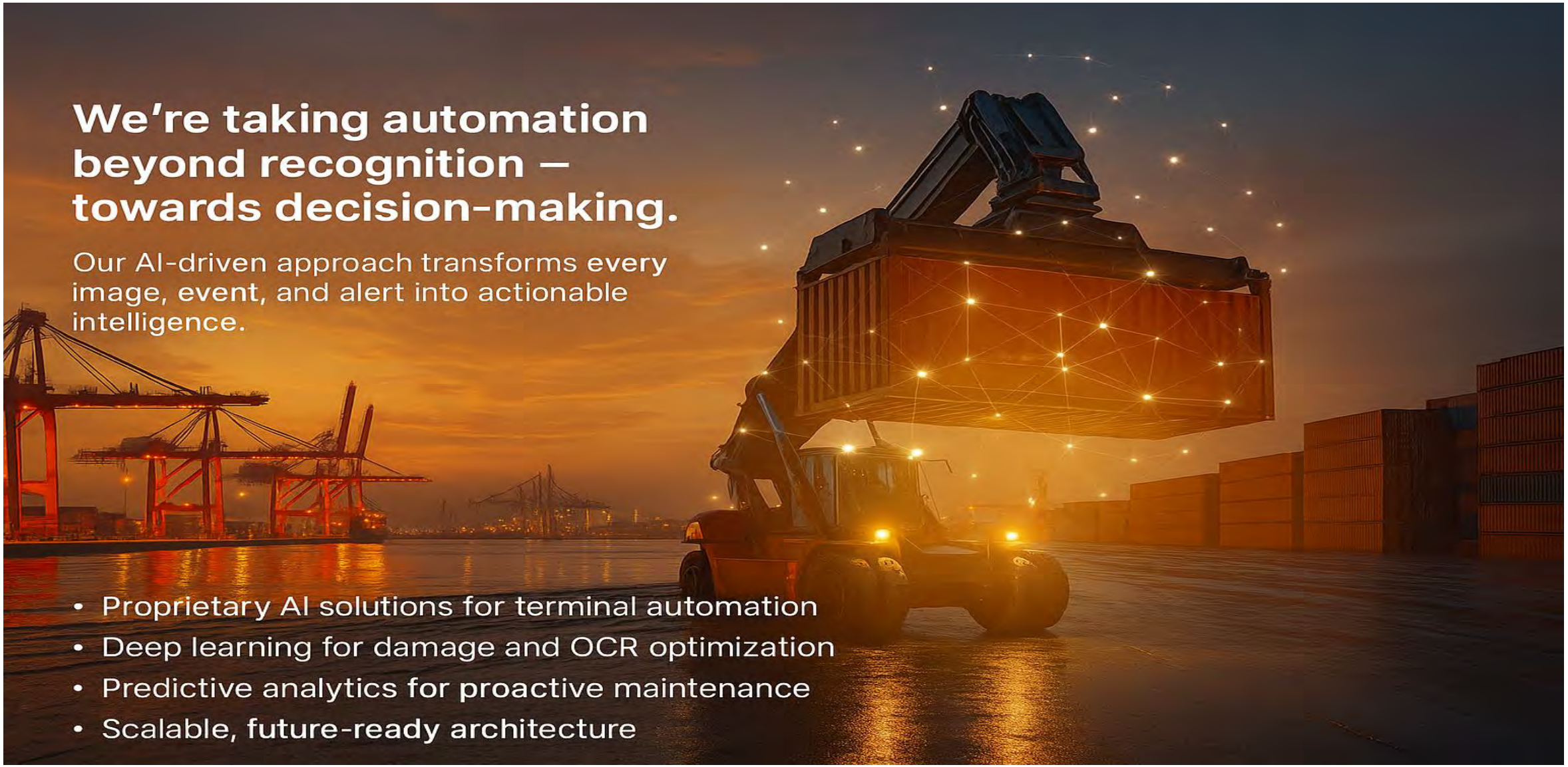
Heavy Load Identificatory
Recognizes heavy loads containers

Seal Recognition
Verifies integrity of containers seal

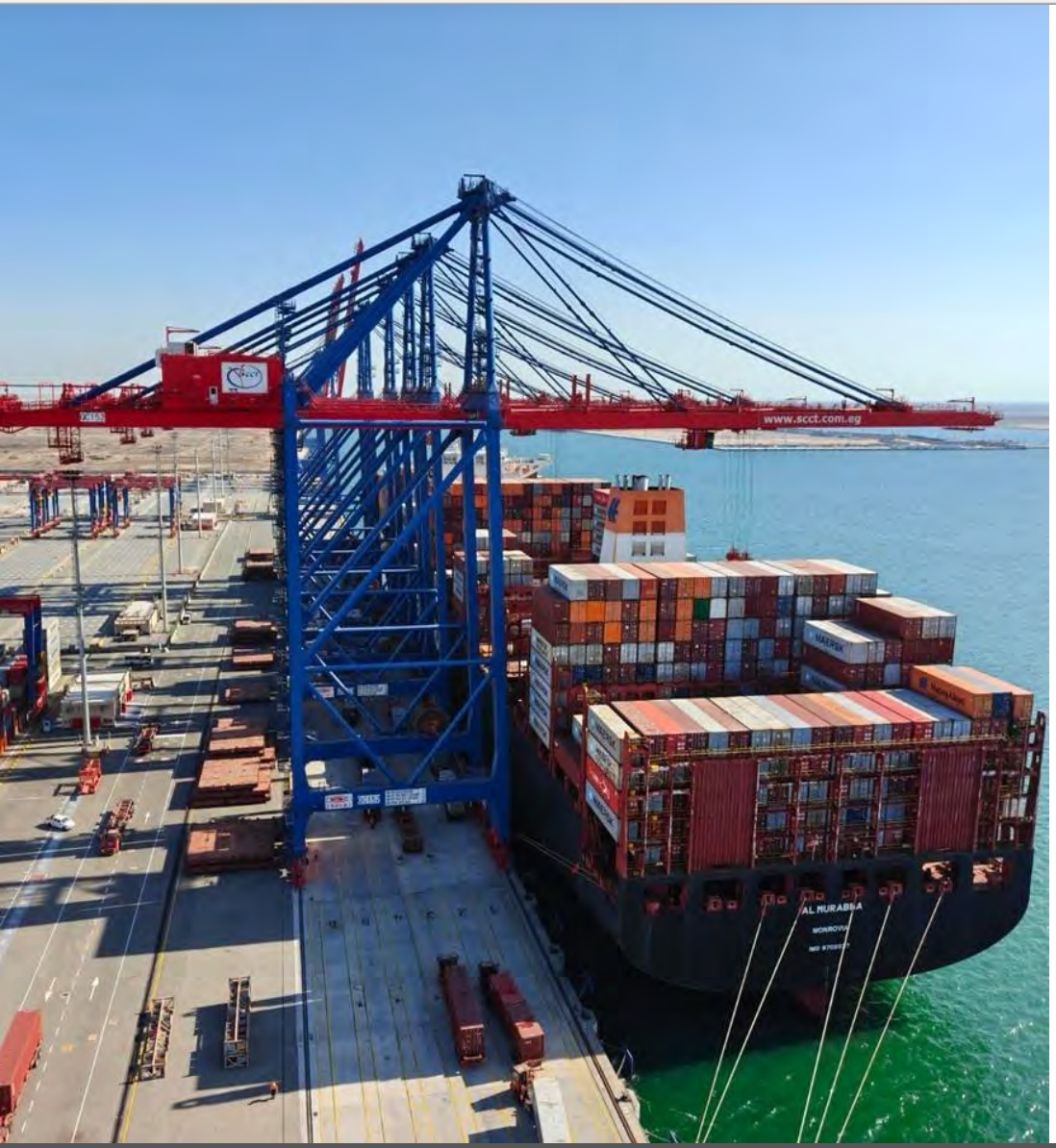
CCHR
Chassis code identification (for internal trucks)

UN Code Identificatory
Recognizes dangerous plates

Artificial Intelligence: The Heart of Our Next Generation Systems



Crane Smart Vision

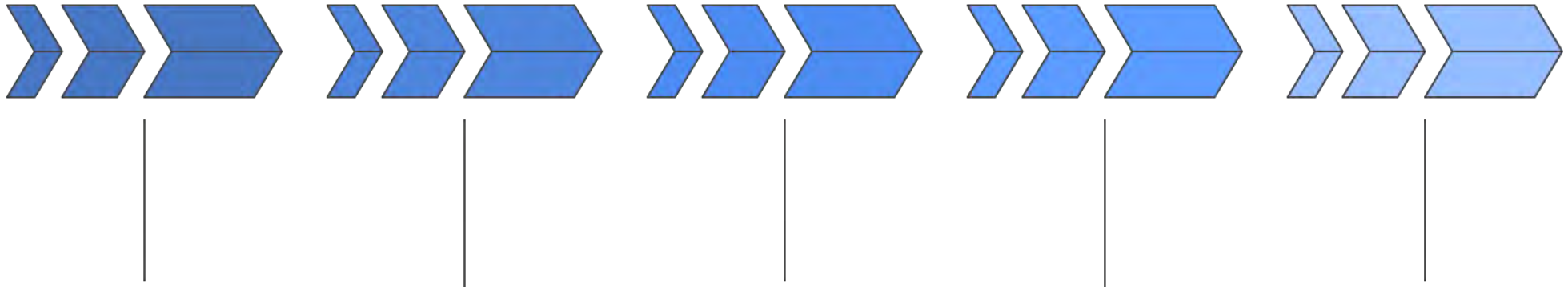


Crane Smart Vision system for container inspection provides a solution for an exhaustive code control of containers that have been loaded or unloaded from STS Cranes to/from the vessel.

- **Real Time Spreader's Monitoring**
- **Movement Identification**
- **Image Capture Optimization**

Crane Smart Vision – Process Flow

Crane Smart Vision Process Flow



Trigger & Capture

Crane events (PLC) trigger camera capture

Image Processing

Edge unit processes images and AI engine reads container info

Context & Validation

OCR result is validated against TOS

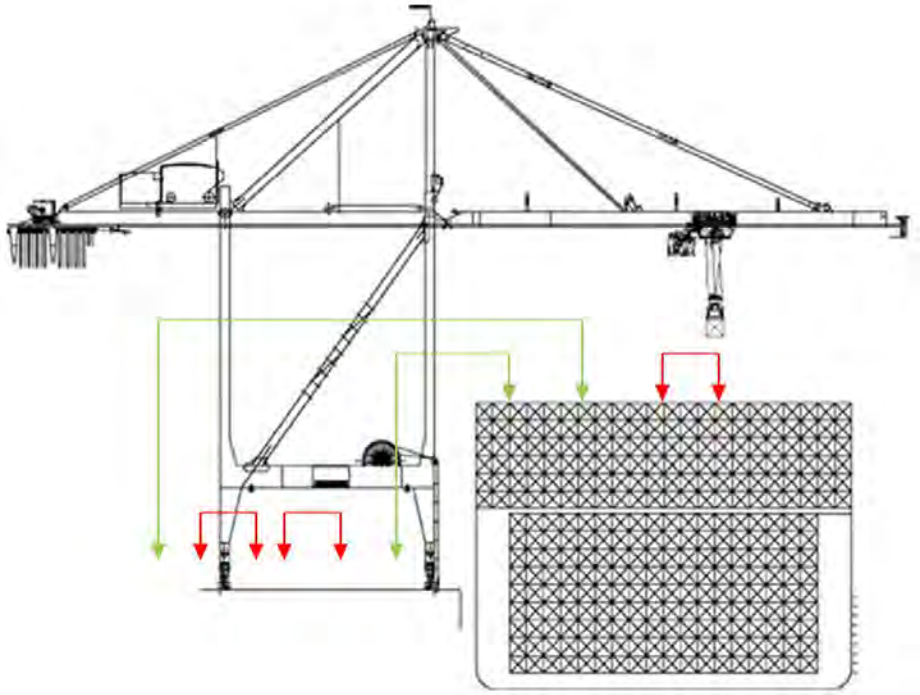
Integration & Feedback

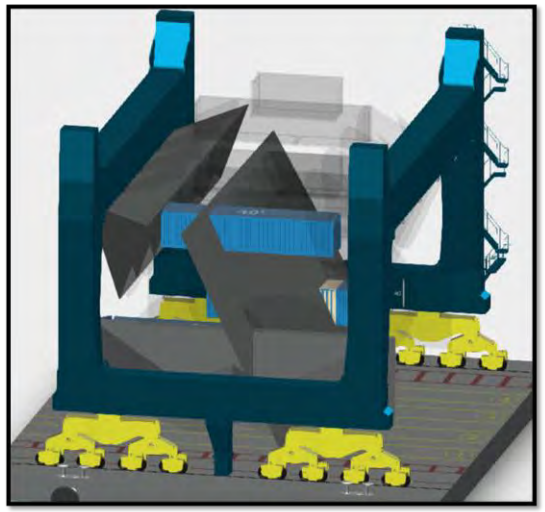
Result is published to TOS and TMEIC software receives status

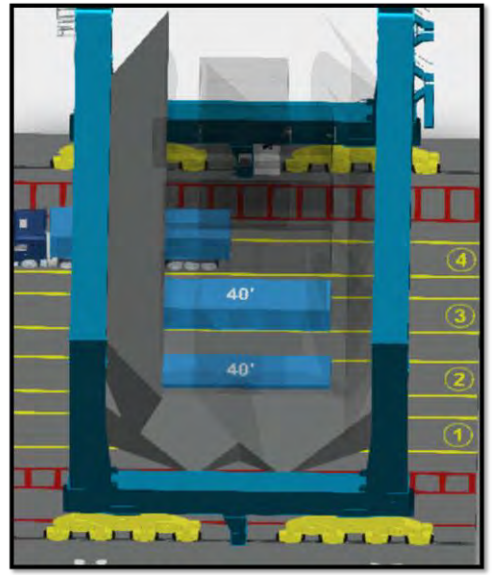
Exeption Handling

Events are logged and monitored by remote clerk

Event-Driven Capture – Integrated with Crane PLC







Sill Beam Cameras

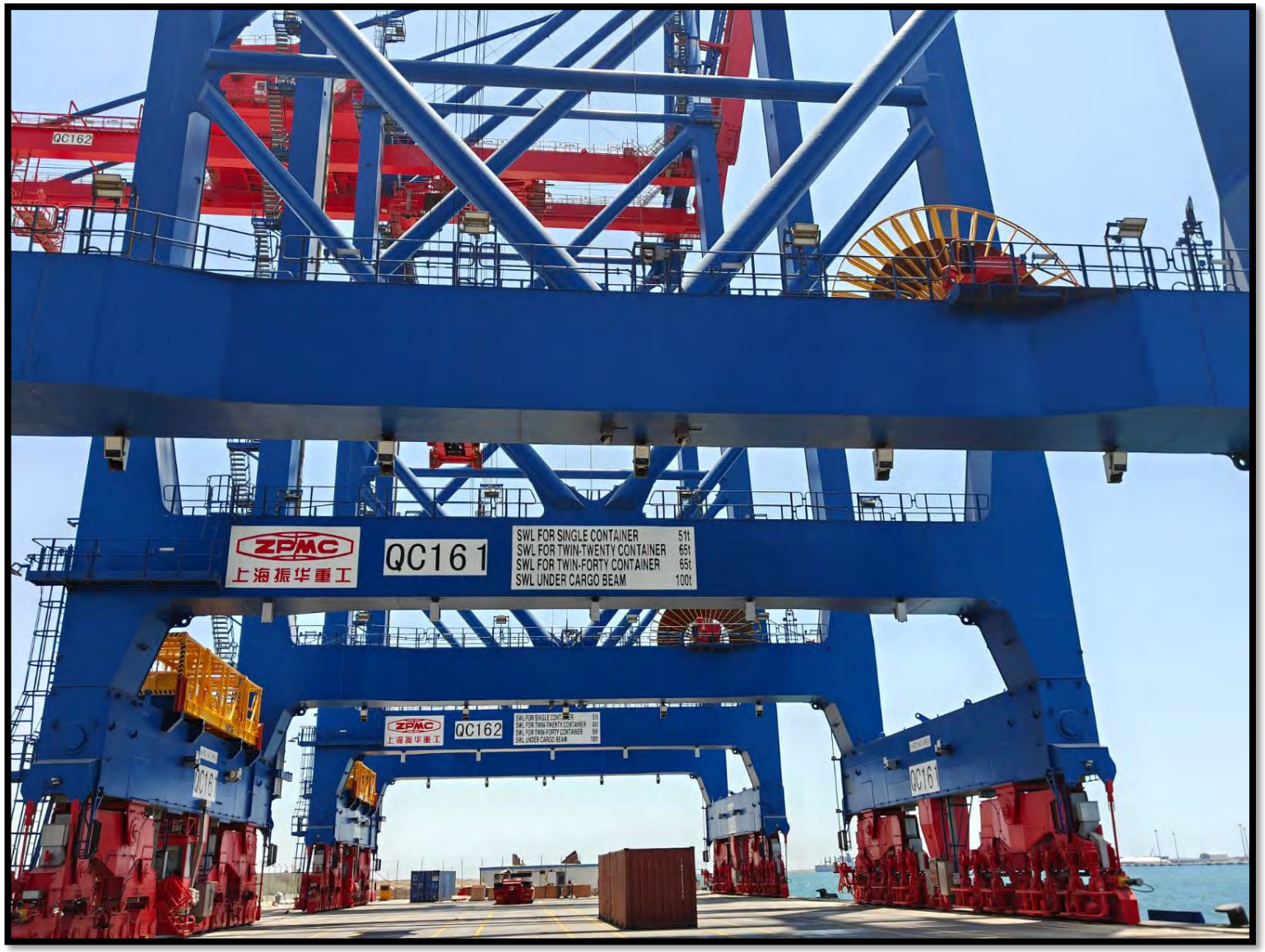
- Fixed Sea Side Cameras
- PTZ Landside Cameras
- Pre-set Positions
- Automatic Rotation Backreach

Camera Layout

Portal Beam Cameras

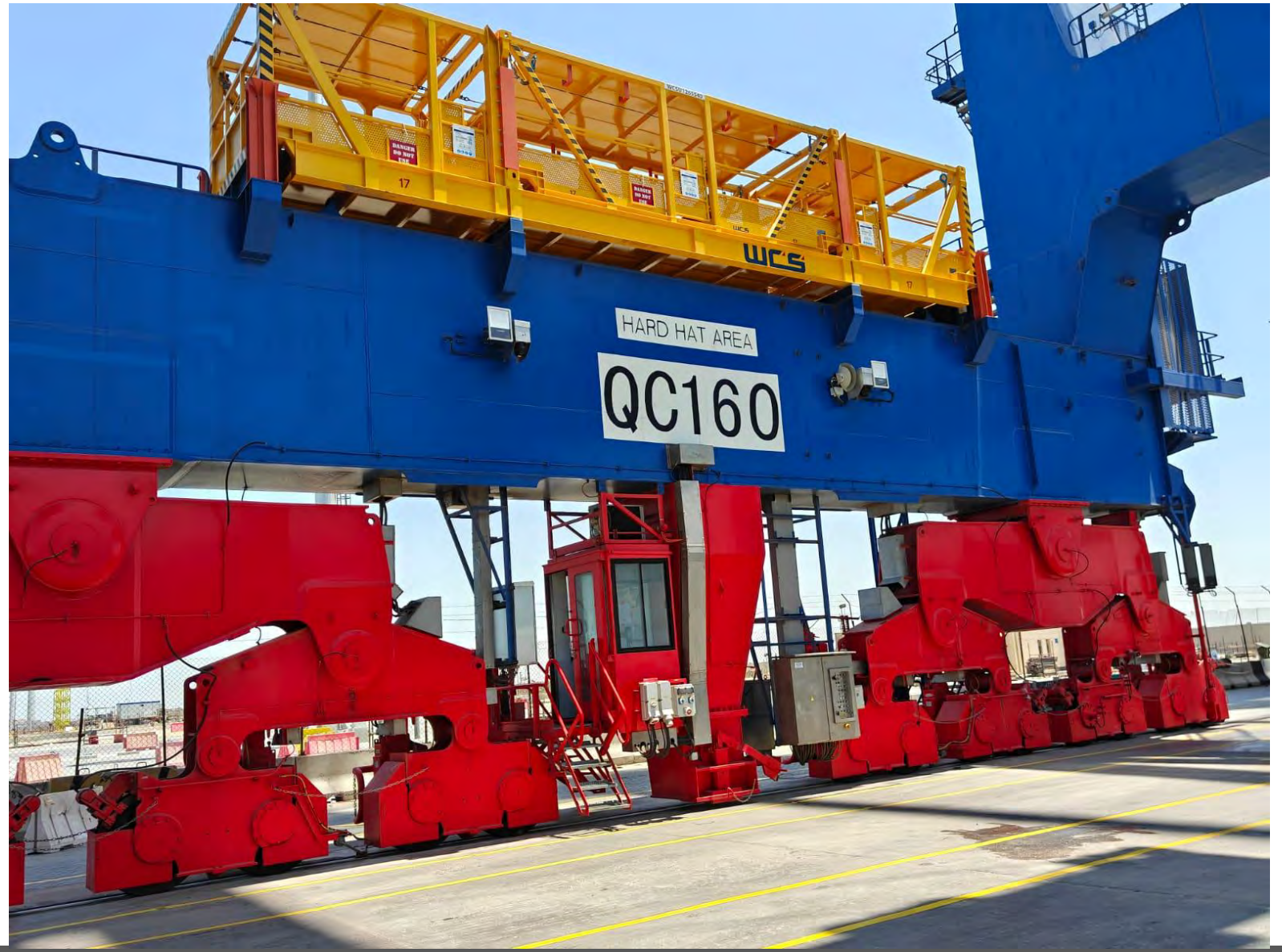
- Full Coverage
- Overlapped Fields of View
- Redundancy
- Motion Blur Reduction

Crane Smart Vision – Portal Beam Camera Position



- Cameras are installed on the bottom side of the portal beam
- A dedicated position that is fully protected and no introduces additional safety risk for the crane or personnel or handling equipment.

Crane Smart Vision – Sill Beam Camera Position



Truck Position System

Truck Position System: From Gate to Crane

TPS ensures trucks are perfectly aligned for loading/unloading under the spreader, regardless of lane or entry direction.

It is **how we connect data with movement** – turning precision into productivity.

Main features & benefits:

- High-Precision Laser System
- Driver Guidance Displays
- Optimized Truck Alignment
- Compact & Modular Design
- Container Dimension Recognition
- Available for STS & RTG

TPS Solution for RTG Yard Crane

➢Compact and modular design enables easy installation on RTG crane structures.

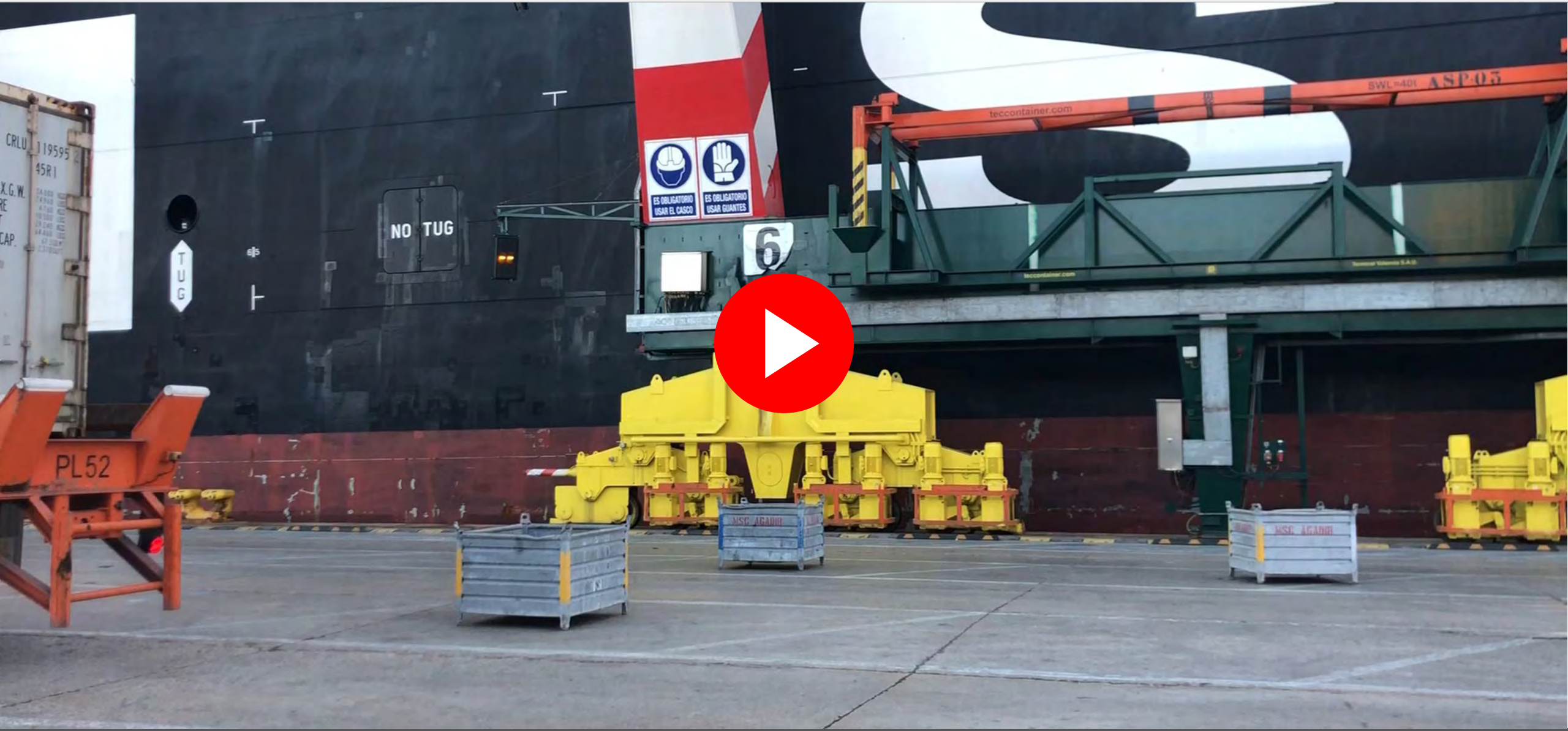
➢Single scanner per RTG ensures efficient operation with minimal hardware.

➢Low maintenance: The system requires little to no upkeep.

➢TPS engineering software provides real-time data visualization, including:

- o Distance to target
- o Container type
- o Positioning time and direction
- o Twist-lock status
- o Spreader position

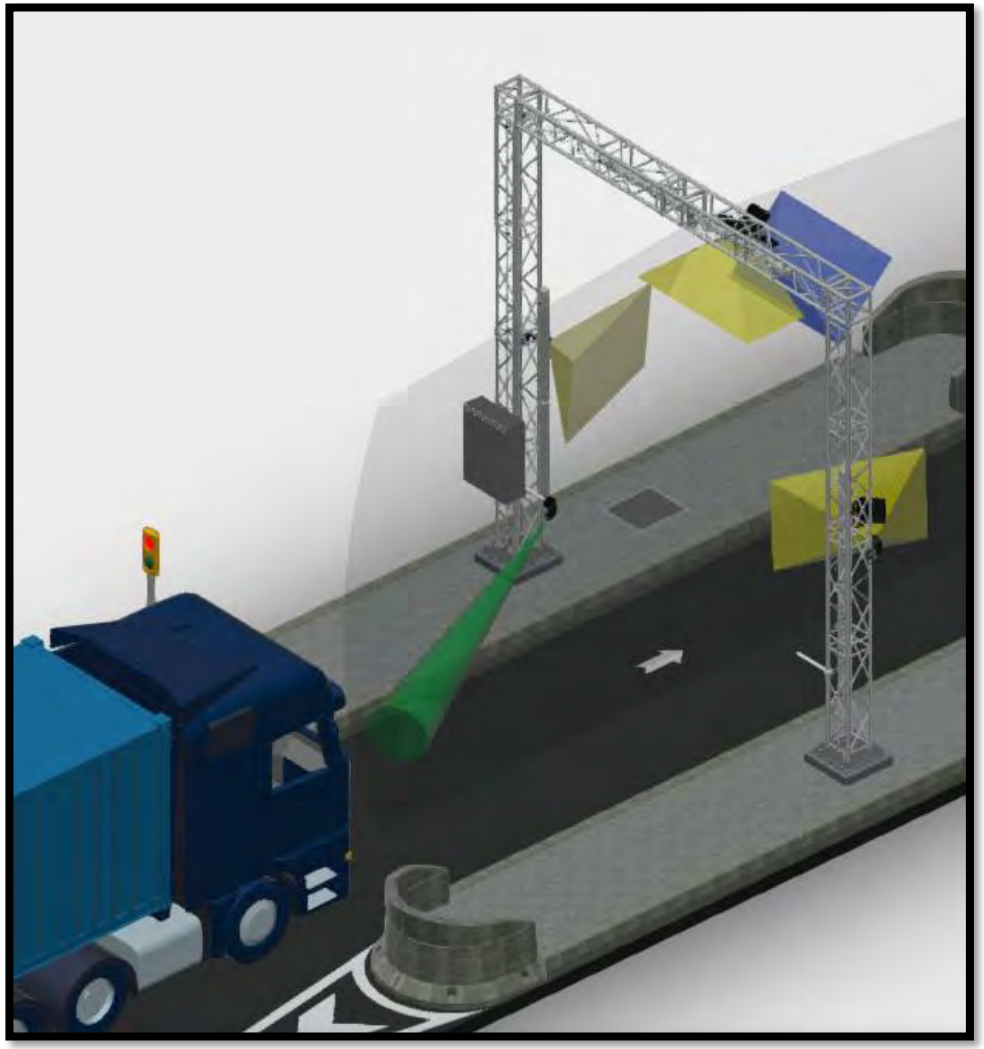
TPS Solution Live



Gate Smart Vision – Portal Beam

Gate Smart Vision – Kiosk

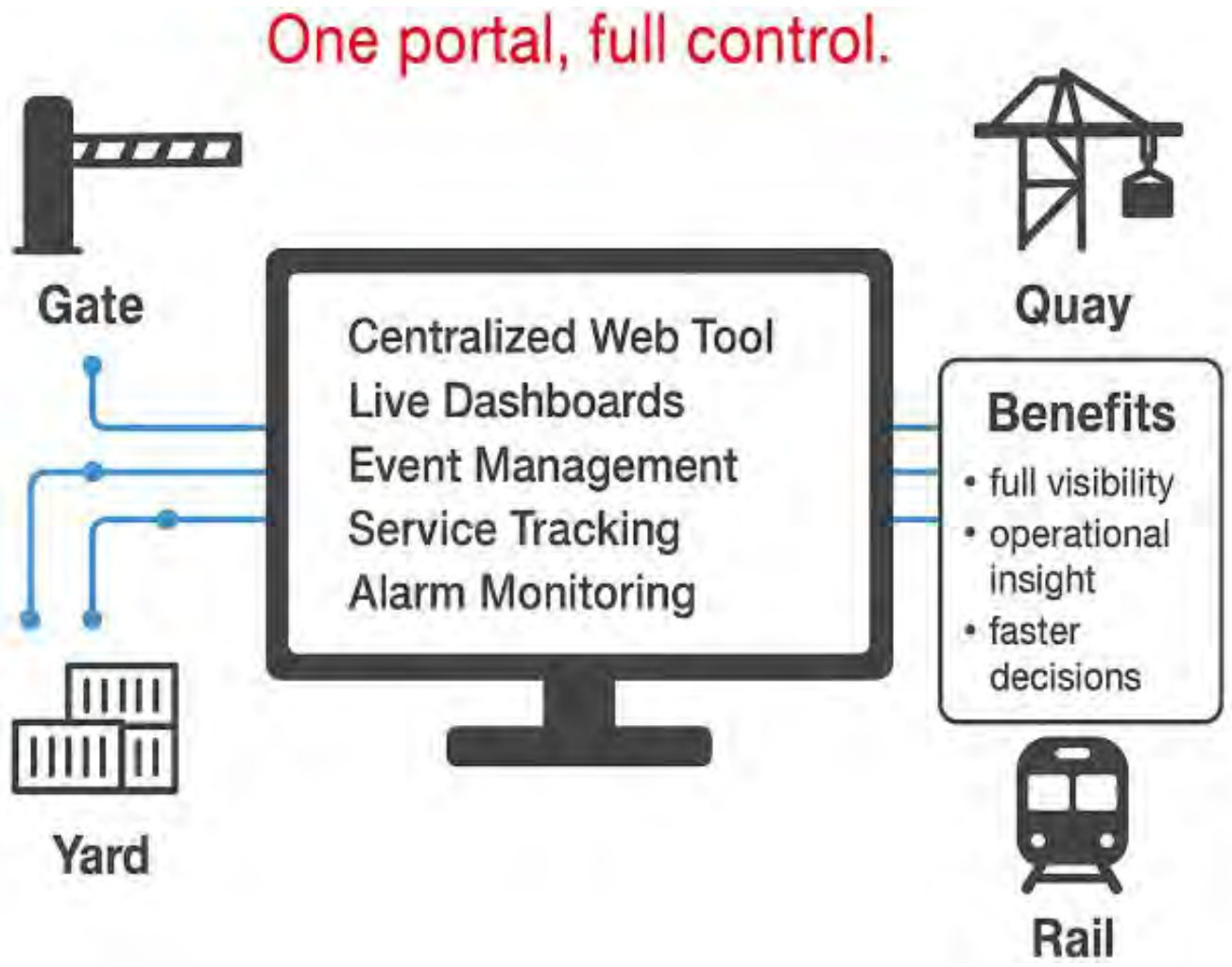
Gate Smart Vision – OCR Portal Layout



Gate Smart Vision – Kiosk Lane Layout

Our Products Functionalities

Unified Management Suite

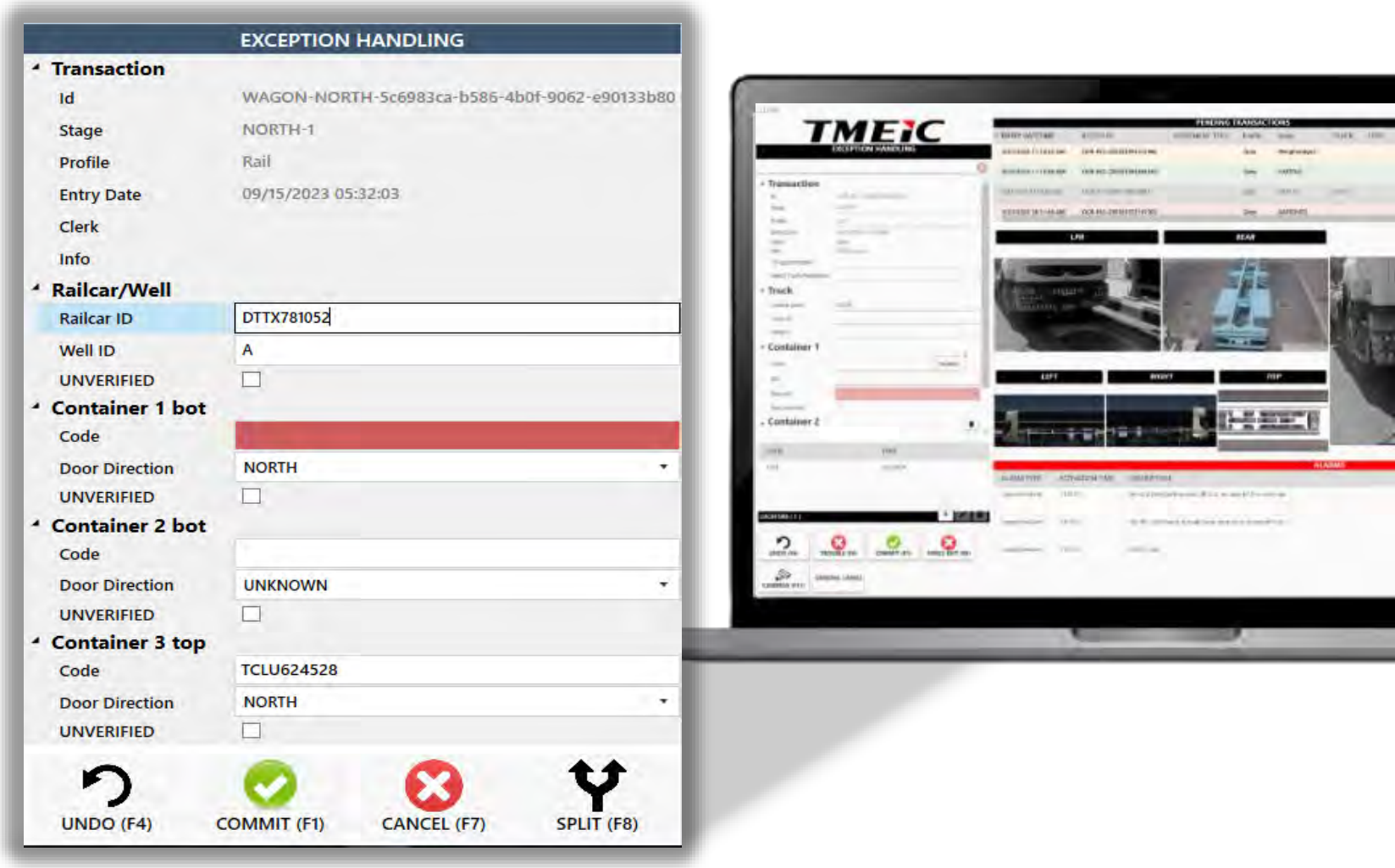


Exception Handling

How we handle exceptions, defines efficiency.

Functionalities:

- Real-time correction of container data
- Register and manage exceptions per area
- Access live and recorded images instantly
- Perform remote verifications efficiently
- Modular and scalable, adaptable per operation area



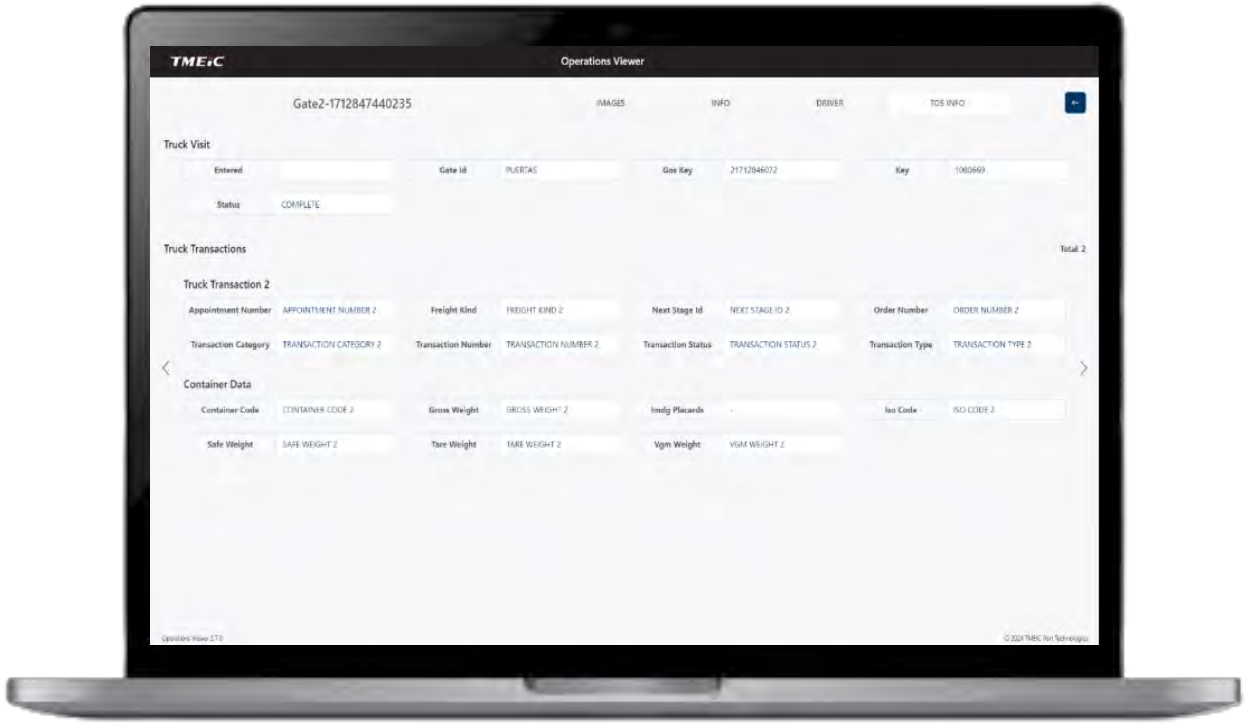
Operations Viewer

One source of truth for every container transaction.

Consolidation of all operational data into one intuitive interface

Key features:

- Complete historical listing of Gate, Crane and Rail transactions.
- Full inspection details, including recoding history
- Direct access to transaction images stored on the file server
- Detailed transaction views with data, images, and recoding info
- Alarm history for enhanced monitoring and control
- TOS transaction information seamlessly integrated
- Export transaction list to Excel or PDF for traceability and documentation.

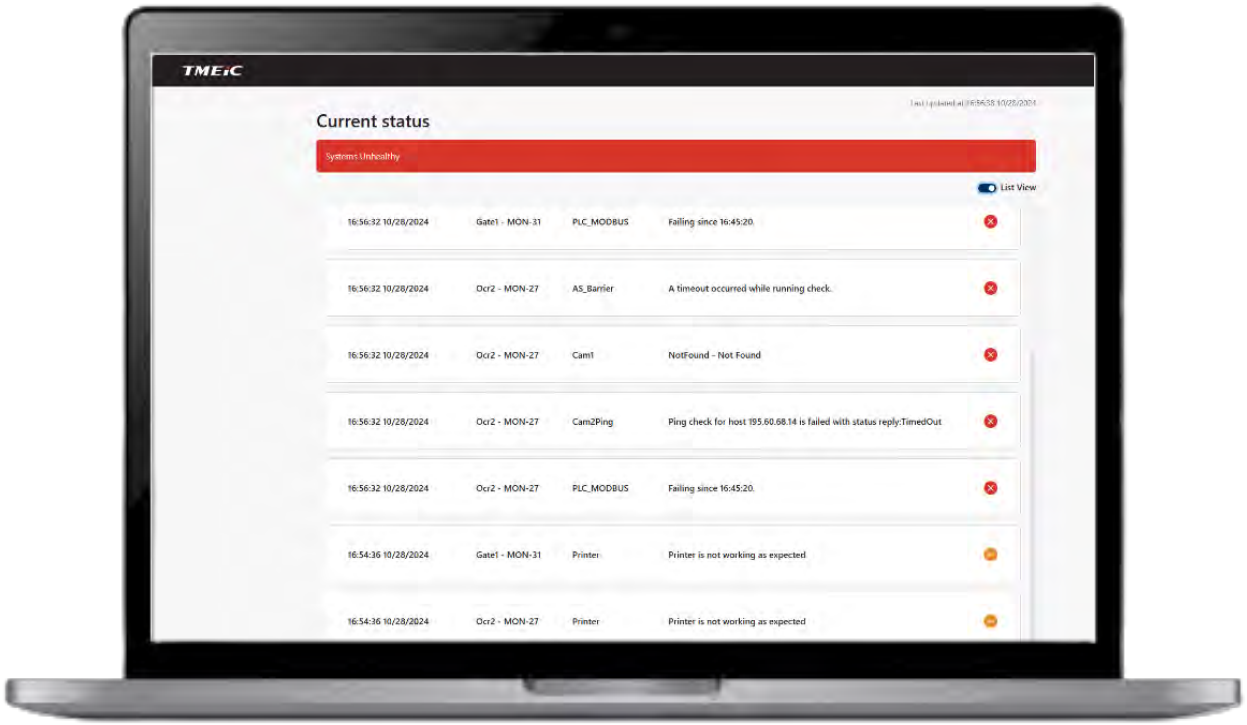


Alarm & Performance Monitoring

We bring all system health data together.

Key features:

- Real-time monitoring of hardware and software performance
- Unified access to multiple operation stages (gates, rail, yard, cranes) with historical data
- Centralized dashboard of active alarms for instant visibility
- Configurable alerts sent to clerks with custom alarm settings.
- Seamless integration with Teams, email, and push notifications.



KPI Dashboard: Turning Data into Actionable Intelligence

Data-Driven Decision for Every Operation Area

Functionalities:

- Real-time monitoring of operational and system KPIs
- Traceability by area: Gate, Crane, Yard, Rail
- Custom dashboards by user or department
- Detects performance trends and bottlenecks early
- Enables proactive decision-making

From metrics to meaning – helping teams anticipate, not just react

Technical Services

From Maintenance to Evolution

Proactive service means no surprises – only performance

At TMEIC, maintenance is not just about fixing - it is about optimizing.

Traditional maintenance reacts to problems.

Our proactive lifecycle management anticipates them – reducing total cost of ownership and ensure long-term uptime

Together, we extend not only the life of your systems, but also the value of your investment

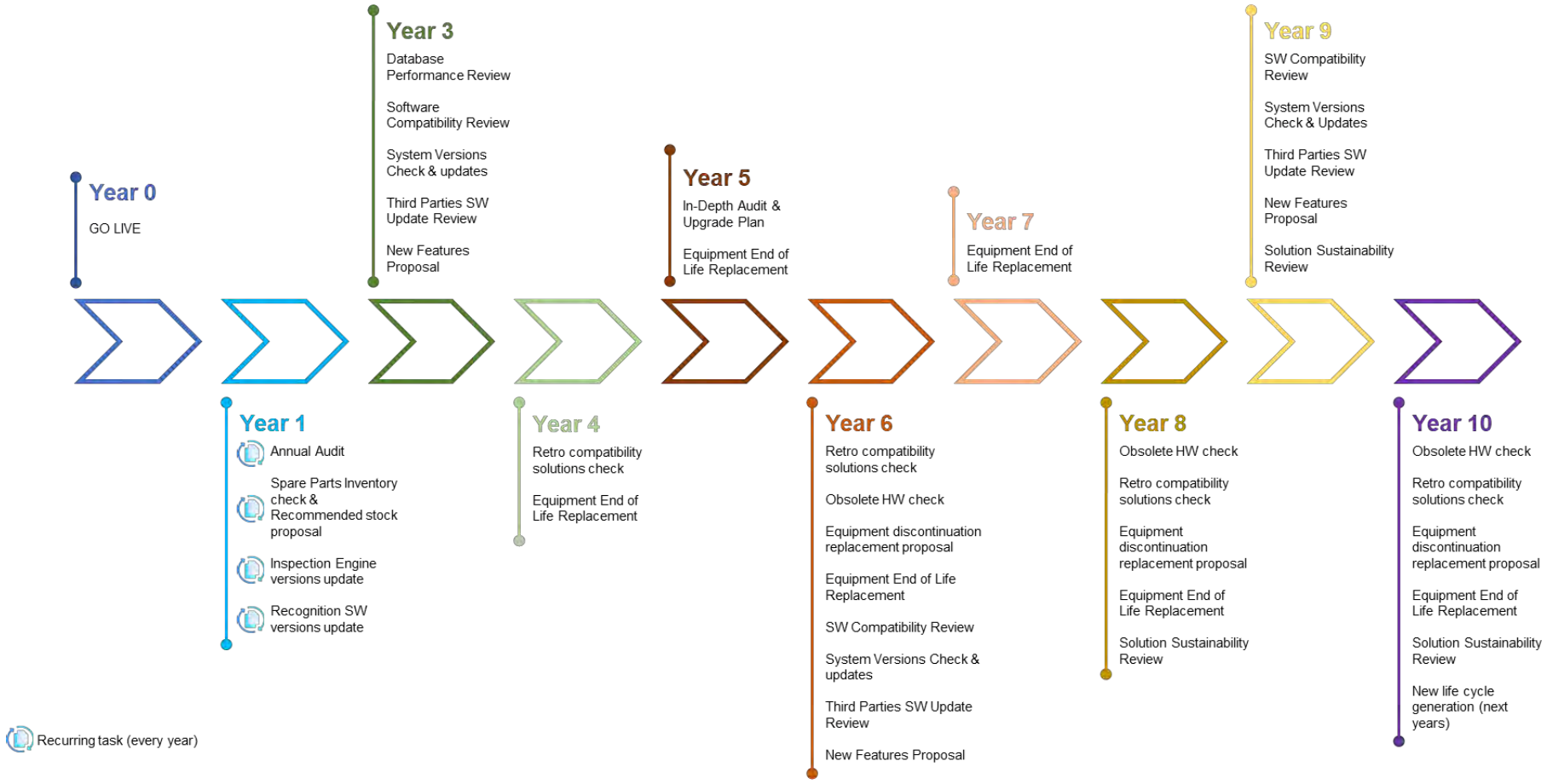
We don’t just fix systems. We keep them improving – ensuring reliability, performance and technological relevance over the years

Strategic Scalability

Tailored coverage through modular add-ons:

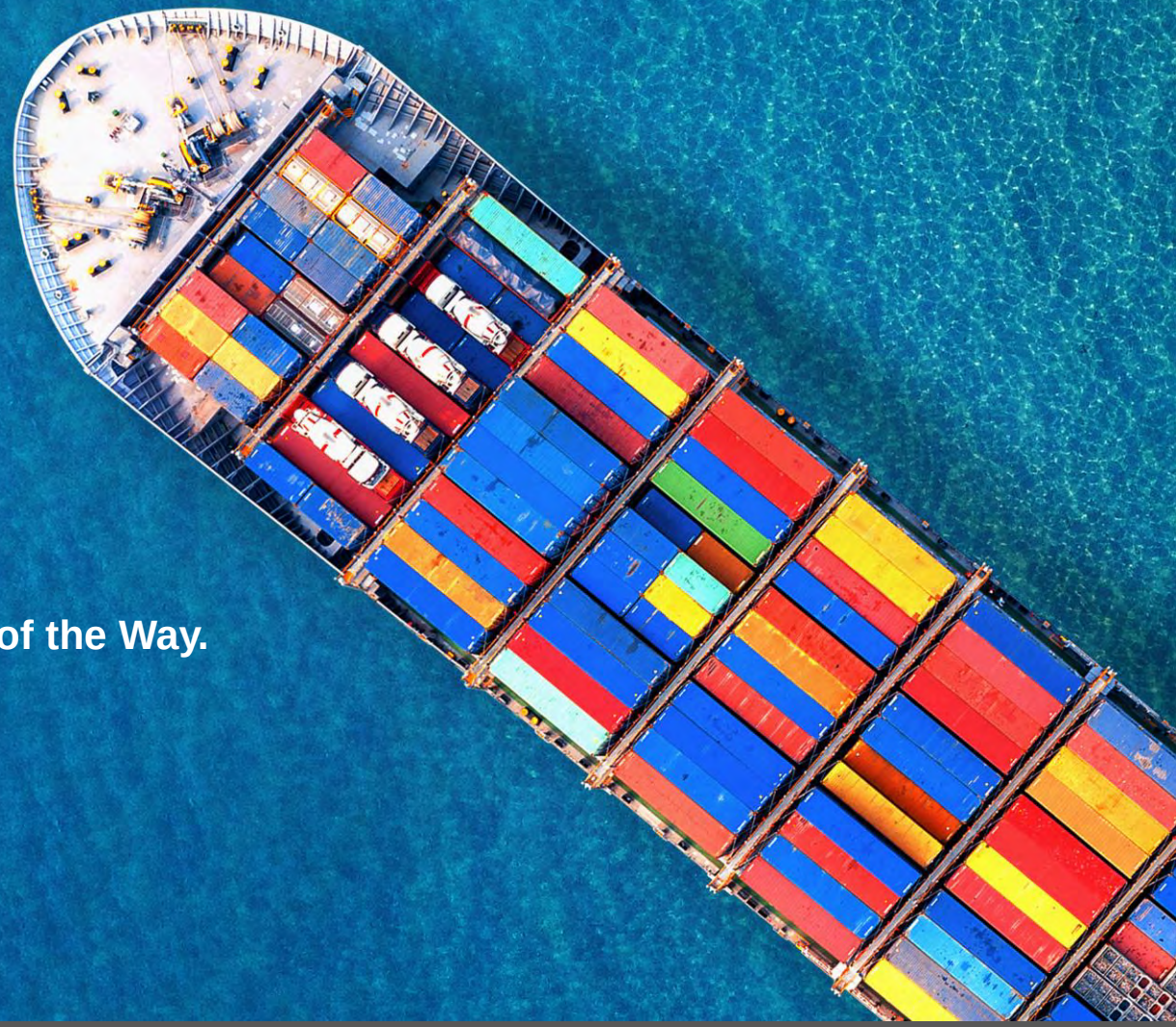
- ❑ **Advanced Technical Skills transfer.**
- ❑ **24/7 on-site HW support.**
- ❑ **Extended Warranty.**
- ❑ **On-site Preventive Maintenance.**

Lifecycle Plan (example)



TMEIC

From Design to Operation — TMEIC is With You Every Step of the Way.



Thank you

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