AICON

Solutions Suite

Maritime Logistics Reimagined

Dynamic Operations. Intelligent Solutions.

Avlino is a US-based Artificial Intelligence company specializing in delivering solutions to enhance the efficiency of container terminal operations. The company aims to transform the supply chain by providing terminal operators with solutions to overcome common pain points that undercut their business goals. With this mission, the company developed AICON, a Solution Suite designed to dynamically solve the challenges of operational volatility and restricted rules-based systems. Combining AI/ML and Operations Research, AICON delivers real-time work instructions and autonomous workflows to significantly reduce inefficient processes, increase throughput, optimize resource utilization and cut down turnaround times.

AVLINO

AICON Comprehensive Solutions Suite

AICON
Solutions Suite

AICON contains three key Solutions developed to meet specific operational needs that work together seamlessly or as standalone. These applications provide actionable insights, dynamic decisions, and autonomous workflows, reducing manual processes while increasing operational accuracy.

AICON Dispatch

Manages and controls equipment, optimizing scheduling, dispatching, and routing for efficient resource usage.

AICON Berth

Enhances berth planning with precise ETA predictions, maximizing occupancy rates and revenue.

AICON Yard

Optimizes container movement and stacking strategy, reducing costs, and expanding yard capacity.

Your Trust, Our Priority

- AICON prioritizes data security with robust cybersecurity standards, strict controls, and regular audits to ensure adherence to industry-leading practices.

- Our dedicated implementation team collaborates with your operations and IT teams to establish secure connections and streamline data streaming.

- Our cybersecurity controls ensure a strategic approach of identifying, prioritizing, evaluating, and managing potential risks and threats to minimize costly downtimes.

Simplifying Implementation

- AICON offers highly secure cloud-based deployment with real-time interfaces for seamless integration with existing TOS and ancillary systems.

- Integration with third-party systems, including TOS, equipment control systems, gate operating systems, and more, ensures efficient data exchange and system interoperability.

- Comprehensive dashboards and operational alerting system for monitoring KPIs, identifying constraints, and driving continuous improvement.

- AICON creates a virtual replica of your terminal operations by using AI-powered digital twin modeling. This powerful technology captures real-time data and simulates container movements, enabling precise predictions and enhanced planning.
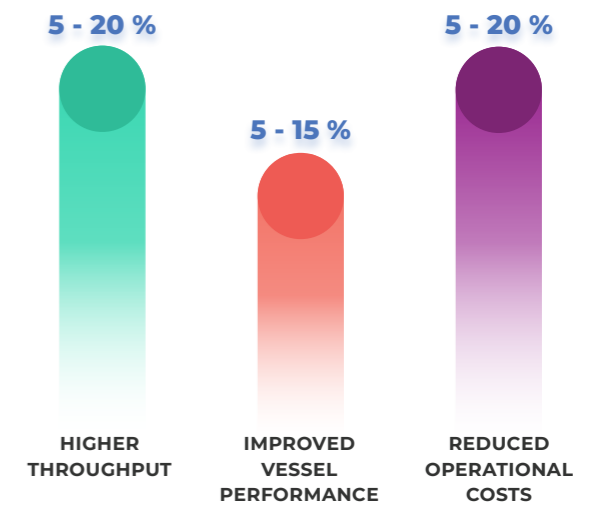
Dynamic Operations, Intelligent Decisions

Container Terminal operations can be complex and challenging. Unpredictable demands, lack of real-time visibility, high operating costs, limited space for expansion and inefficient processes are the raw nerves that hinder operational efficiency and profitability.

AICON is a Solutions Suite designed to tackle the pain points resulting from dynamic conditions in container terminals. Combining the power of AI/ML and Operations Research, AICON optimizes operational strategies and offers intelligent decision-making to drive sustainable growth.

Exceed the Past. Shape the Future.

5 - 20 %
HIGHER THROUGHPUT

5 - 15 %
IMPROVED VESSEL PERFORMANCE

5 - 20 %
REDUCED OPERATIONAL COSTS

AICON Berth

Intelligent Berth Management, Activated

AICON Berth is a cutting-edge Berth Planning Solution powered by AI/ML technology and advanced optimization techniques to transform the way terminal operators manage their berth operations. AICON Berth offers unparalleled opportunities for win-win berth utilization by combining real-time feeds with predicted vessel arrival and durations for optimal berth planning, and adding collaboration tools with vessel operators and other key stakeholders.

Your Quay Potential, Maximized

AI-Powered Berth Optimization

AICON Berth aligns berth planning with yard container inventory position and provides accurate predictions of vessel ETAs, ETCs, visit duration, and berth assignments.

Auto Berth Plan and QC Allocations

AICON Berth automates the berth planning process, generating efficient berth plans, and optimizing the allocation of QCs across the entire quay for seamless operations.

Integration with Third-Party Systems

AICON Berth seamlessly integrates with third-party systems such as Marine Traffic, Weather, and Tides, enhancing data accuracy and enabling better decision support.

Berth Planning for Ad hoc Requests

AICON Berth provides the flexibility to handle ad hoc requests and accommodate changing operational requirements, ensuring efficient and responsive berth management.

Exceed the Past. Shape the Future.
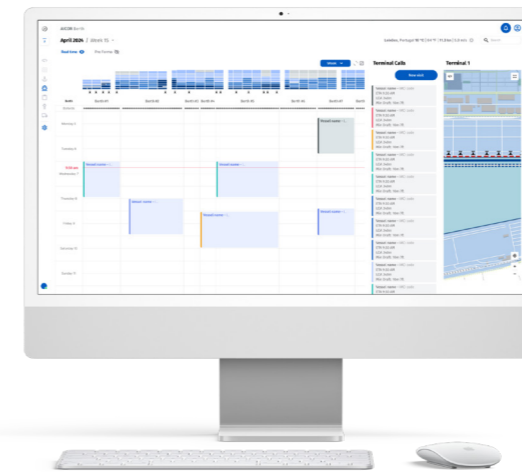
5 - 20 %
INCREASED BERTH UTILIZATION

15 - 50 %
IMPROVED VESSEL VISIT ETA & DURATION RELIABILITY

5 - 25 %
REDUCE VESSEL WAIT TIMES AT ANCHOR

Vessel Operator Collaboration

With real-time collaboration and visibility, AICON Berth enables terminal operators to engage with vessel operators and other port community constituents, fostering enhanced decision-making, better customer service and enabling cost savings across multiple parties.

Tide and Channel Planning

AICON Berth plans berth usage by considering tide and channel conditions, ensuring that vessel movements are safe and efficient.

Berth Viewer

AICON Berth provides a comprehensive view of upcoming berth states aiding in long-term planning and strategic.

Increase Utilization. Amplify Revenue.

Maximized Berth Utilization

- Increases berth occupancy rates, ensuring optimal utilization of valuable berth space and maximizing revenue potential.

Reliable Vessel Visits

- Applies AI-powered predictions to enhance the accuracy of vessel visit ETAs and durations, improving operational planning and reducing delays.

Improved Berth Availability

- Provides reliable information of berth availability, enabling effective negotiation of arrival and departure times with vessel operators and enhancing customer service.

Reduced Environmental Impact

- Reduces fuel consumption and associated costs, by optimizing berth utilization and vessel schedules, contributing to a greener port operation, and improving the bottom line of a terminal's primary customers.

Data-Driven Decision Making

- Empowers port operators with advanced analytics and valuable insights, enabling continuous process improvement and better strategic decision-making.

Comprehensive Future Planning

- Provides insights into future states and resource needs, supporting long-term strategic initiatives.

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AICON Yard

Stay Ahead of Every Move

AICON
Yard

AICON Yard is a cuting-edge Yard Planning Solution designed to optimize container movement and stacking strategy within container terminals. By leveraging AI-powered digital twin modeling, AICON Yard empowers terminal operators to streamline operations, reduce costs, and improve throughput by strategically placing containers in the yard based on predictive insights.

Empower Smarter Moves

Optimal Container Stacking

AICON Yard determines the optimal placement of containers, both import and transshipment/export containers, entering the yard via different transport modes. By considering predictive exit times, vessel berth, load patterns, QC splits, and sequencing, AICON Yard ensures containers are strategically stacked to minimize unproductive moves and maximize yard capacity.

Real-time Housekeeping

AICON Yard generates ongoing housekeeping moves to maintain optimal yard conditions in response to changing information and schedules. This ensures that containers are positioned in ideal locations for efficient departure via gate, rail, or vessel.

Predictive Container Movement Analysis

AICON Yard employs advanced predictive algorithms to analyze historical and real-time data, accurately forecasting future container moves within the yard. By anticipating container flows, AICON Yard optimizes planning and resource allocation.

Exceed the Past.
Shape the Future.

5 - 20 %

INCREASED CHE
PRODUCTIVITY

5 - 10 %

IMPROVED VESSEL
LOAD SEQUENCING
AND PRODUCTIVITY

25 - 60 %

REDUCTION IN
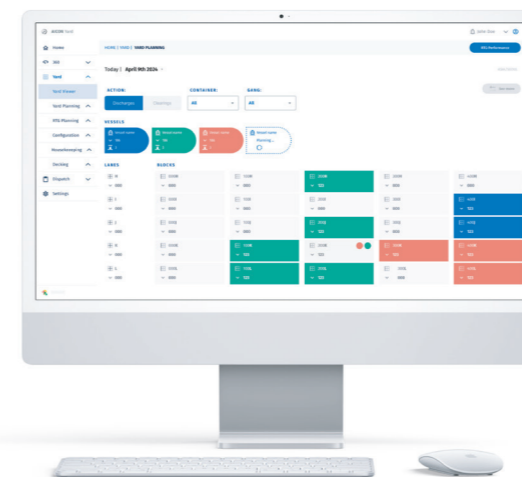REHANDLES AND
UNPRODUCTIVE
MOVES

Hunker Down Mode

AICON Yard plans container stacking in preparation for extreme weather conditions ensuring the yard is optimally configured to withstand adverse climate, minimizing disruptions and enhancing safety.

Hazardous Containers Segregation

AICON Yard incorporates segregation of hazardous containers, ensuring compliance with safety regulations and minimizing risks.

Yard Viewer

AICON Yard offers a comprehensive view of upcoming yard conditions, aiding long-term planning and strategic decision-making to proactively manage yard conditions. AICON Yard includes yard occupancy alerts and predictive alerts for yard, gate, and vessel overflow, as well as comprehensive KPIs & Metrics Analytics, providing critical insights into yard performance.

Higher Throughput, Lower Rehandles

Reduced Costs and Unproductive Moves

- Reduces costs associated with unnecessary container movements, saving both time and resources.

Enhanced Equipment Productivity

- Ensures optimal utilization of CHEs, minimizing idle time and increasing productivity.

Improved Vessel Load Sequencing

- Enhances vessel load sequencing with predictive capabilities, resulting in more efficient loading and unloading processes and improved vessel turn time.

Reduced Travel Time and Distance

- Minimizes travel time and distance for CHEs advancing operational efficiency and reducing fuel consumption.

Lower Costs and Emissions

- Helps reduce costs associated with fuel and CHEs maintenance, aligning with sustainability goals, contributing to lower emissions and promoting greener terminal operations.

Enhanced Safety and Compliance

- Ensures that the yard operates safely and in compliance with regulations, enhancing overall safety and reducing the risk of incidents.

AICON Dispatch

Dispatch Smarter with End-to-End Intelligence

AICON Dispatch is a cutting-edge Equipment Management and Control Solution designed to optimize scheduling, dispatching, and routing within container terminals. By harnessing the power of AI/ML and Operations Research, AICON Dispatch assesses container handling operations continuously to deliver unmatched efficiency of critical equipment without the hardships of micromanagement.

Let Efficiency Drive More Cargo

Intelligent Job Assignment

AICON Dispatch intelligently assigns container move jobs to the appropriate equipment, including yard-based container handling equipment (CHEs), Prime Movers, and Ship to Shore Cranes. It ensures precise sequencing, timing, and allocation of specific jobs, optimizing operational efficiency.

Optimize Required Resources

AICON Dispatch defines the number of required equipment and their specific locations in the yard, for the upcoming working shifts ensuring that both labor and equipment are efficiently scheduled to complete all necessary tasks, including vessel load, discharge, gate receival, deliveries, rail load, and discharge.

Seamless Integration

AICON Dispatch provides direct integration with various Yard Equipment manufacturers to optimally distribute Work Instructions to all active CHEs in real-time, allowing seamless connectivity and collaboration for streamlined operations.

Dynamic Equipment Pooling

With support for various pooling options for Prime Movers and dispatching, AICON Dispatch enables efficient utilization of resources while reducing congestion and waiting times.

Multi-Lift Support

AICON Dispatch facilitates multi-lift equipment moves, including twin, quad, and tandem lifts, enabling efficient handling of multiple containers in a single operation.

Yard Crane Optimization

By enabling double cycling of Yard Cranes (ASCs, RMGs) and offering opportunistic tailgate moves for blocks with multiple cranes, AICON Dispatch maximizes the productivity of crane operations.

Exceed the Past. Shape the Future.

5 - 30 %
INCREASED CHE/PM PRODUCTIVITY AND UTILIZATION

10 - 50 %
REDUCTION IN CHE/ QC WAIT TIMES

30 - 70 %
REDUCE PM UNLADEN TRAVEL TIME

AICON Dispatch

Turn Moves per Hour into Profitable Advantages

Enhance Productivity and Utilization
- Increases the productivity and utilization of CHEs ensuring optimal resource allocation, minimizing downtime and enabling continuous operational flows.

Increase HTE Utilization
- Minimizes the number of required horizontal transport equipment, ensuring that resources are used where they are most needed without redundancy.

Reduce Travel Time and Congestion
- Improves operational efficiency by intelligently assigning jobs and optimizing routing to reduce travel time, unladen travel distances and congestion.

Increase Vessel Productivity
- Enhances vessel productivity by reducing QCs' hanging-hook times during discharge and loading operations, providing more efficiency.

Faster Turnaround Times
- Streamlines equipment management and accelerates vessel and truck turnaround times, enhancing terminal performance and customer satisfaction as well as increasing new revenue opportunities.

Cost Reduction and Lower Emissions
- Helps lower costs associated with fuel, equipment maintenance, and idle time, contributing to reduced emissions and environmental sustainability.

AI Solutions that Move the Right Equipment, More Containers and Profits Up

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