

REAL-TIME LOCATION SYSTEM (RTLS)

Smarter Yards. Greener Ports Real-Time Precision

Challenges in Port Efficiency and The Need for Advanced RTLS



Inaccurate fleet visibility



Congested yard operations



Environmental regulations and compliance pressure



Lack of centralized decision-making information



Inefficient data sharing between stakeholders

Why our solution ?

This new AI-RTLS framework goes beyond tracking, integrating:

1

Engine Diagnostics – Real-time monitoring & predictive maintenance

2

Edge Enabled RFID Computing – Smarter Readers for intelligent and latency free operation monitoring & control

3

Portable Emissions Measurement System (PEMS) – Direct emissions tracking

4

AI & Analytics Engine – Data-driven decision making for optimization

5

Microservices- Based Architecture – Scalable, future-proof system



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WHAT MAKES IGO'S RTL AI-FIRST

- Context-aware and predictive
- AI-optimized autonomous movement
- Predictive and prescriptive alerts
- Self-improving decision algorithms
- Federated data and AI-driven orchestration



“ Before vs. After – Impact

Feature	Before Implementation	After Implementation
Equipment Uptime	Frequent Breakdowns	Maximized Availability
Container Movements	Inefficient Routing	Optimized Logistics
Fuel Efficiency	Excessive Consumption	Resource Optimization
Environmental Reporting	Estimation-Based	Data-Driven Precision
Maintenance Approach	Calendar-Based	Predictive Intelligence

Business Gains

Direct Cost Reduction

- Lower maintenance costs
- Fuel savings
- Improved labour efficiency

Capacity Enhancement

- Higher equipment utilization
- Increase in container moves per hour
- Better space utilization

Competitive Advantage

- Better service levels and sustainability compliance
- Cost leadership through operational efficiencies
- AI-driven strategic planning