Solvo.TOS
Maritime Container Terminals

Solvo.TOS is a comprehensive **container terminal operating system** capable of effective real-time management of container handling operations ensuring quick return on investment.

One of the core **benefits of Solvo.TOS** is fully integrated process optimization toolkit available as part of a standard solution. Includes automated CHE pooling and routing, automated crane sequencing, container putaway in the yard based on predefined rules and strategies, automated vessel and rail stowage plan generation and more.

TOS functionality highlights

- Automated and semi-automated vessel cargo planning capabilities;
- Full EDI support (SMDG compliant);
- Built-in yard and equipment optimization features: automated CHE pooling and routing, crane sequencing, container putaway in the yard based on rules and strategies, container vessel and rail stowage optimization and more;
- Patent-pending STS-crane workstation;
- Bird-eye interactive terminal layout viewer and editor;
- Berth planning module;
- Block train scheduling and management;
- Multi-parameter rail-car loading/discharge planning;
- Gate management capabilities including self-service kiosks, truck-driver permits, e-signature support and more;
- WEB portal for shipping line agents and cargo-forwarders including pre-bookings for container pick-up and delivery using time-slots etc.;
- RFID-seal support;
- Optical character recognition (OCR) support for streamlined container, LPN, block-train identification;
- Container terminal automation capabilities: direct communication with on-board crane systems (ASC, AGVs, straddle-carriers, etc.);
- Semi-automated resource planning and labor management;
- Advanced reporting and KPI dashboards;
- Full VGM compliance and management;
- CFS (Container freight station capabilities including stuffing and unstuffing, weighing, etc.);
- Automated reefer container monitoring;
- Customs clearance management including communication with specialized customs software;
- Billing and invoicing capabilities.

Total terminal productivity boost **up to 20%**

Non-functional highlights

- SOA-architecture
- WEB-interface capabilities
- Mobile Android interface for operators and tallymen
- Support of different modes for wireless communication: Wi-Fi, GSM, narrow-band
- Integration with PCS, PMIS, ERP, VBS, AGMS, BFEP, EAMS, etc.
- Fail-safe recovery: dual server back-up and cluster configuration capabilities

Solvo.TOS overview

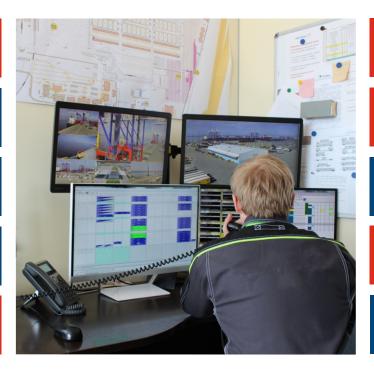|	
Vessel management	Yard management
Gate operations	Equipment control
Berth planning	Reefer management
3rd party software integration	Terminal automation
3rd party hardware integration	Customs clearance module

Rail operations management	Truck operations management
IMDG management	Resource planning
KPI	EDI
Web	Billing
CFS	Empty container depot management

Solvo.TOS Efficiency

400+ successful projects

Terminal Operating Costs

- Improved and more efficient usage of container handling equipment;
- Optimized usage of space;
- Decrease operating costs by eliminating empty runs for loaders, saving fuel and power, and extending the equipment lifespan;
- Reduced rehandles and reshuffles.

Logistics

- Optimize container flow and achieve 100% traceability;
- Increased data accuracy (up to 99.9%): know who, what, where and when at the port in real-time;
- Choose optimal handling procedure depending on container type, amount of available resources and other factors;
- Optimize use of the terminal's operation areas: space utilization can be increased by 5 to 20% for different zone types.

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