



Latest IT Solutions to Manage Various Cargo Operations in Ports and Terminals of Any Type

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About Solvo



28+ years experience



24/7/365 support



5 offices worldwide



400+ projects

Who we are

SOLVO is an international leading vendor of TOS, WMS and YMS solutions and systems integrator on the global markets.

We are a leading provider of high-end supply chain solutions to help and optimize the logistics and all cargo handling.

Our approach

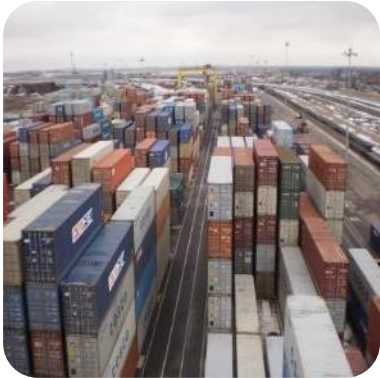
Not just development and implementation. We have the largest expertise in automating storage logistics and are ready to work on a turnkey basis, taking risks. We are a leading firm in providing quality and value to our customer.

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Certificates



Business core areas



Solutions for ports and terminals

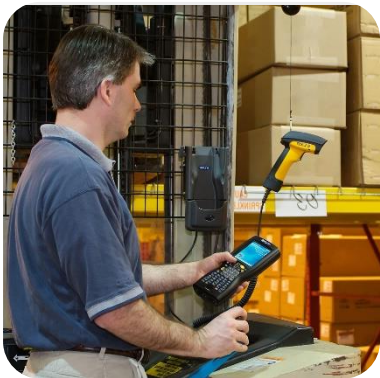
A leading Terminal Operating System for ports and terminals. An ultimate set of solutions for managing just any type of cargo: container, break bulk, Ro-Ro, general cargo, etc., including extra solutions as the VBS, AGMS, VGM.



Solutions for managing yard

YMS helps to manage all the operations at the yards, including allocation and storage of different types of cargo, housekeeping, reefer and empty containers management, CFS management etc. Providing procurement of gate-entry/cargo pick-up permits for truck-drivers, trucks and cargo forwarders/transport companies.

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Solutions for warehouse logistics

One of the leading software providers of SCE software. Solutions range from WMS to WCS, Yard, Billing, KPI and more for all verticals: production, retail and distribution, 3PL and pharmaceuticals.



Consultancy in logistics and system integration

Logistics and Management consultants, including specializations for Project Management, Optimization, Engineering, Design and Procurement.

As well as training, seminars, webinars and other educational events.

Modern ports are moving to Extended Supply Chain

INTERNATIONAL TRADE SUMMARY

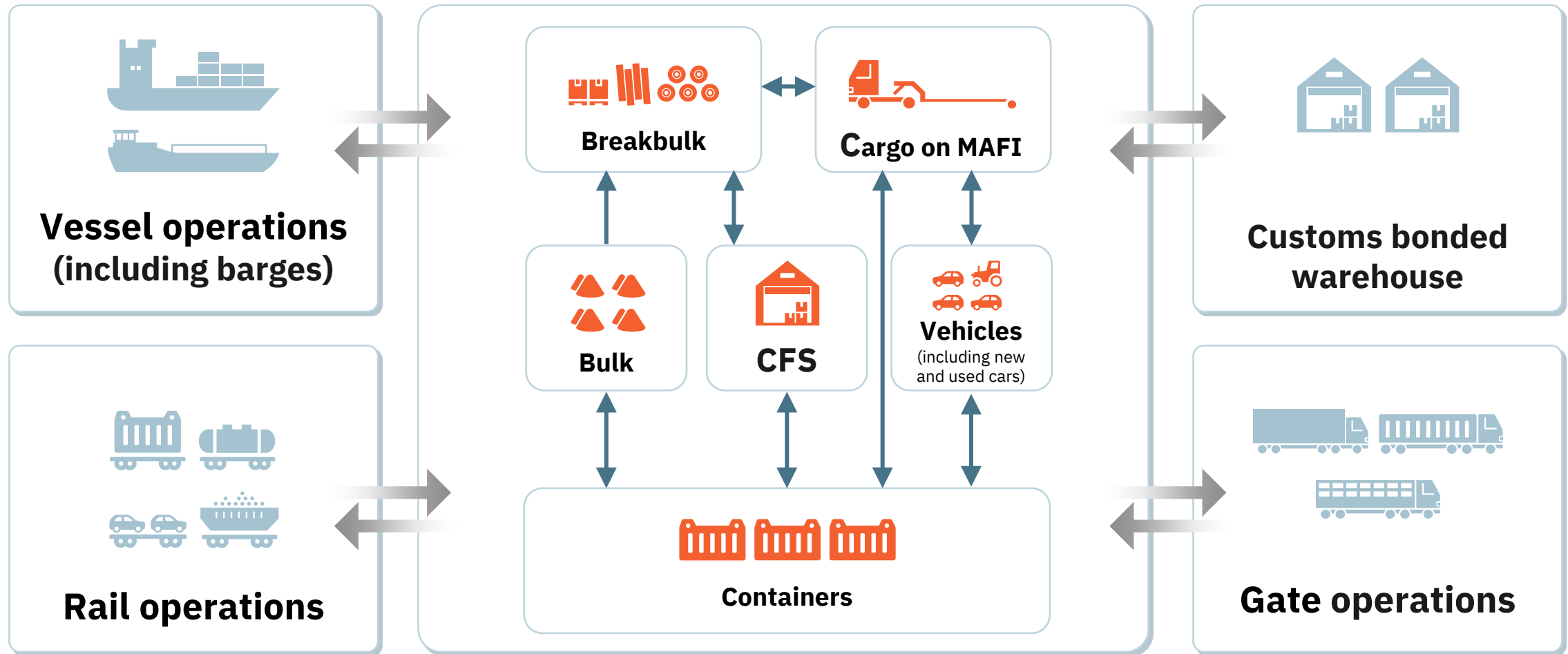


- Moving to Global Supply Chain
- Global Information Environment Connecting All the Elements of the Supply Chain
- End to End visibility – to final customer

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Modern TOS as a full Supply Chain solution and an integration platform

Support of complex technological chains



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Solvo.TOS overview

Solvo.TOS



Gate management



Yard management



Truck operations management



Screening zone management



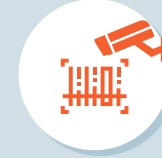
CFS (stuffing/restuffing)



Vessel planning



Repair zone management



OCR-systems (Gate, crane, rail)



Empty container depot management



Berth planning



Rail operations management



Remote control of automatic equipment



Customs systems



Data capture terminals



CHE management



EDI



KPI



Web



Automatic reefer monitoring



Global positioning systems (DGPS, RTK, GNSS, RTLS)



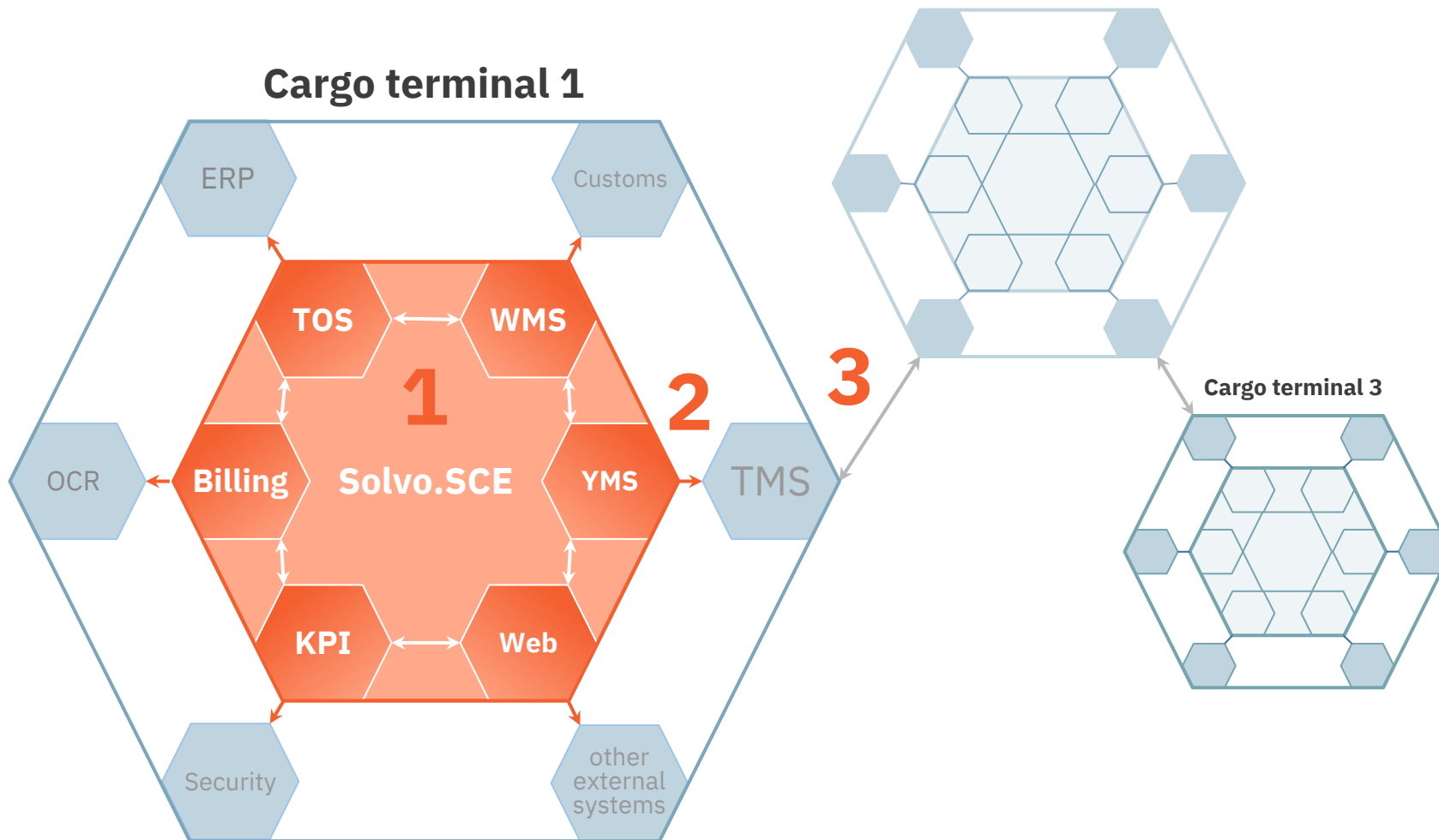
External ERP systems



Crane systems STS, RTG/RMG, RTLS/DGPS

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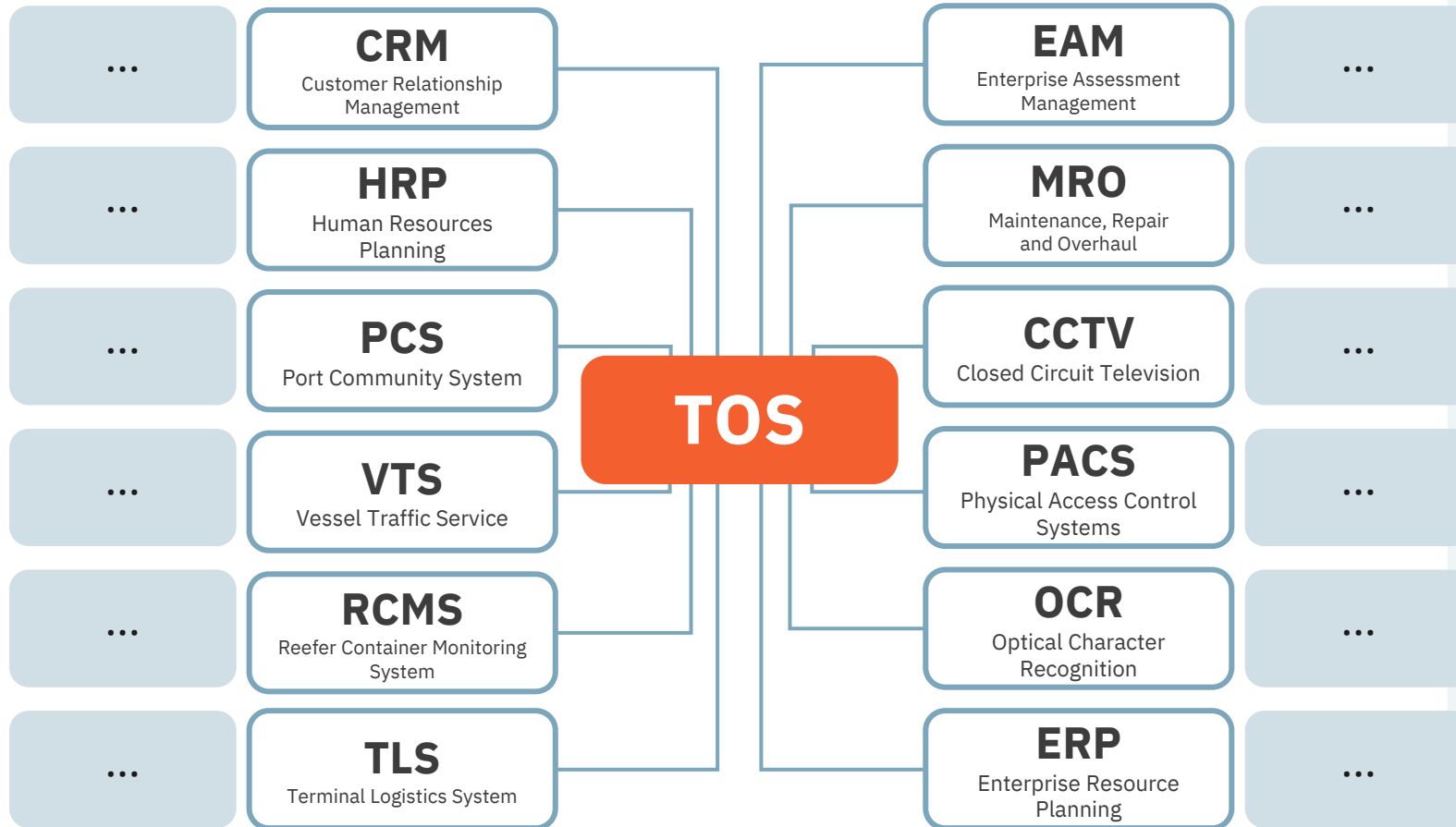
System Integration Levels



- 1. Solvo.SCE Platform** based solutions (integration between Solvo products).
- 2. Integration** between Solvo solutions and external software.
- 3. Integration** between different logistics facilities or participants of the Global Supply Chain

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Solvo.TOS Integration Opportunities



Solvo.API (Application Programming Interface) is divided into two modules: EDI (Electronic Data Interchange) for receiving and transformation data from external information systems and Notifier for preparing messages in the required format for external information systems when certain events occur.

System receives a document with a message from the port system — integration platform — transfer it to the EDI module in various formats, which are then converted into the format required for the **Solvo.TOS** database. As a result, the user receives all this information online.

Solution highlights



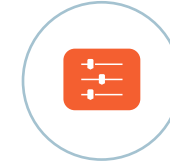
Modular framework

All-in-one solution that enables scalability: add new functions and add-ons as the port grows



Multi-lingual

By default supports major languages



Easily-adjustable

The architecture allows extensive parameterization and customization



EDI and simple integration

Can easily be integrated with any ERP, TMS or other special software



Single database

The latest version uses a single db both for process management and document automation

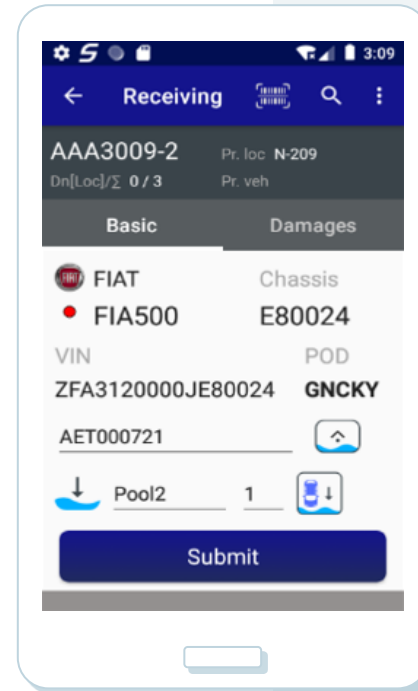
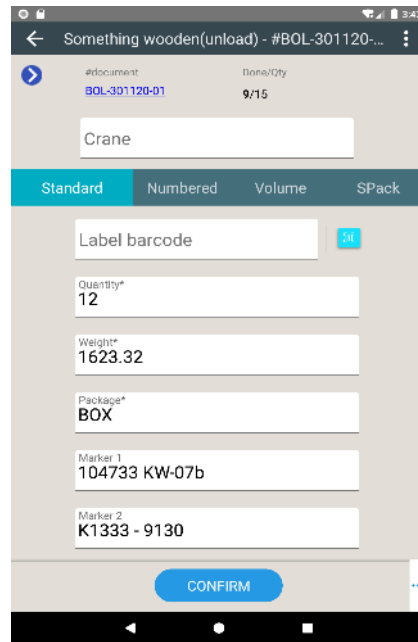
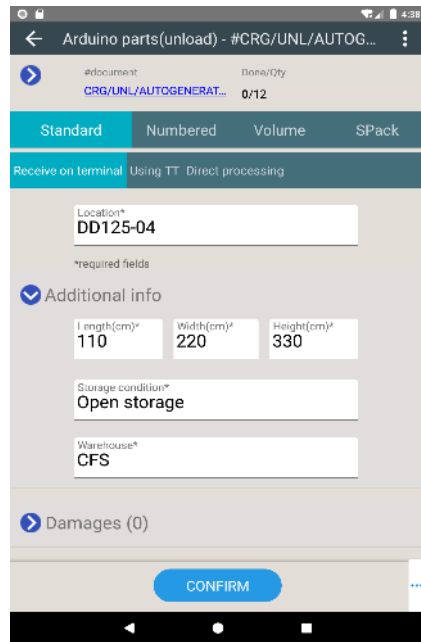
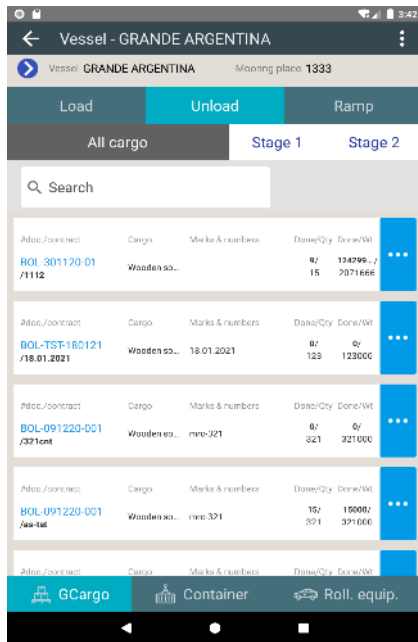


GUI

The application has a graphic, simple, comfortable, fast-and-friendly user interface which facilitates rapid learning

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Cargo characteristics processed by Solvo.TOS



Among cargo characteristics processed by Solvo.TOS:

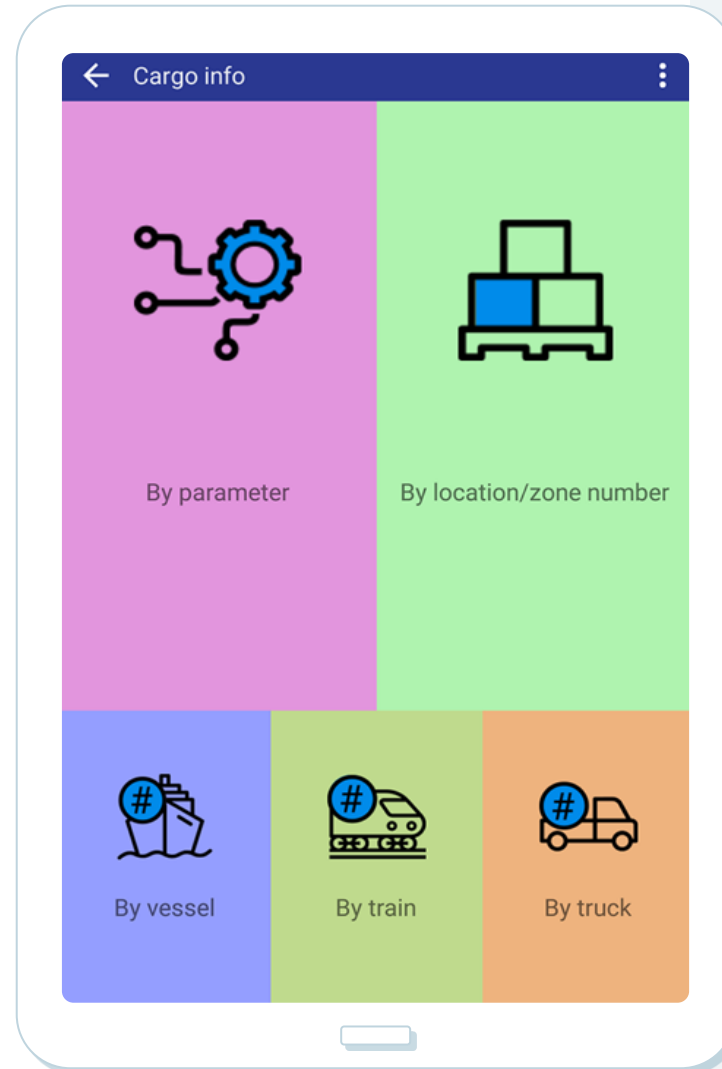
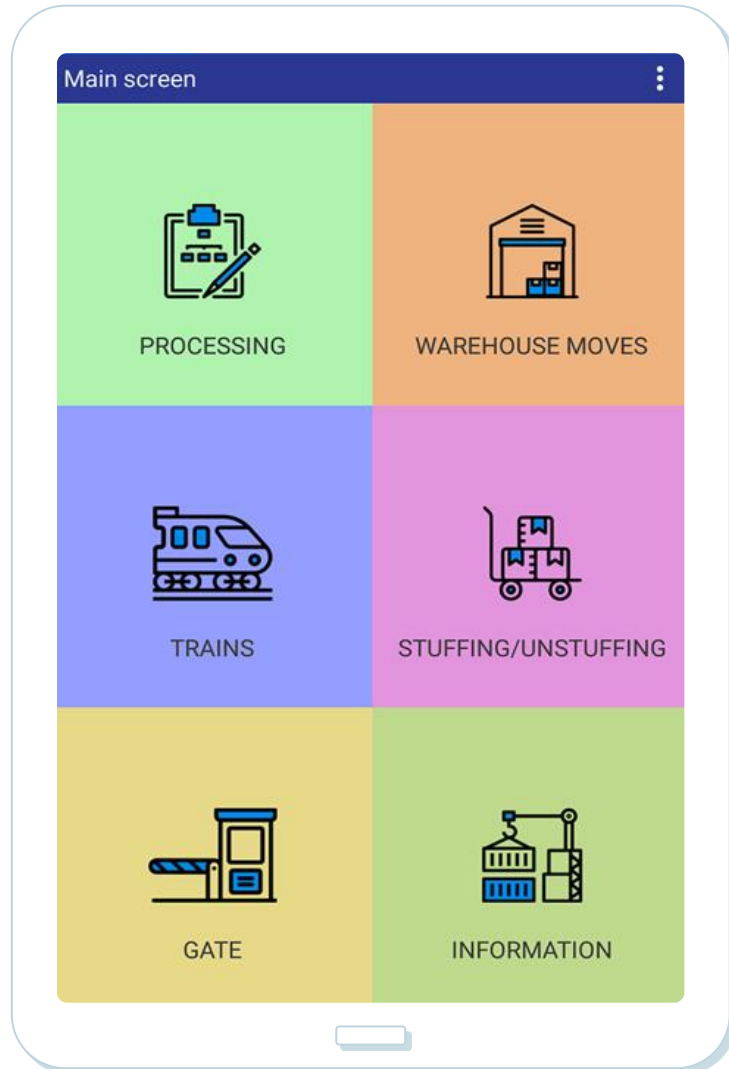
Package type, weight, quantity, dimensions (length, width, height), marking (label), markers.

For each cargo type the system can have specific characteristics, for example, cars:

VIN number, color, mode, dimensions (length, width), weight, type.

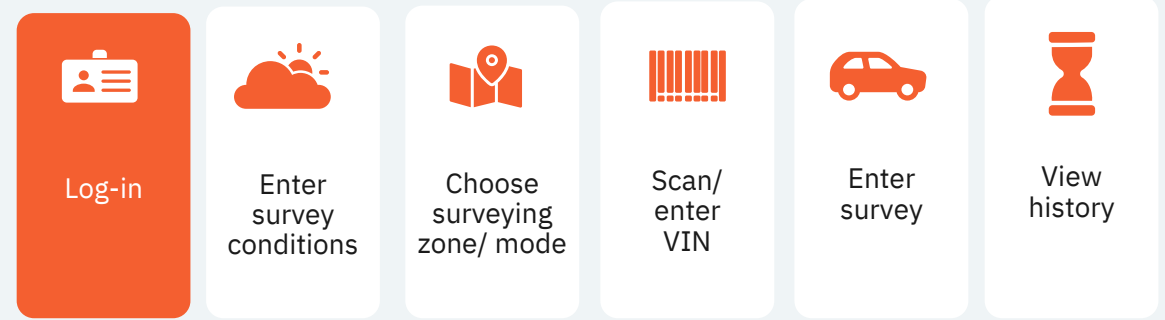
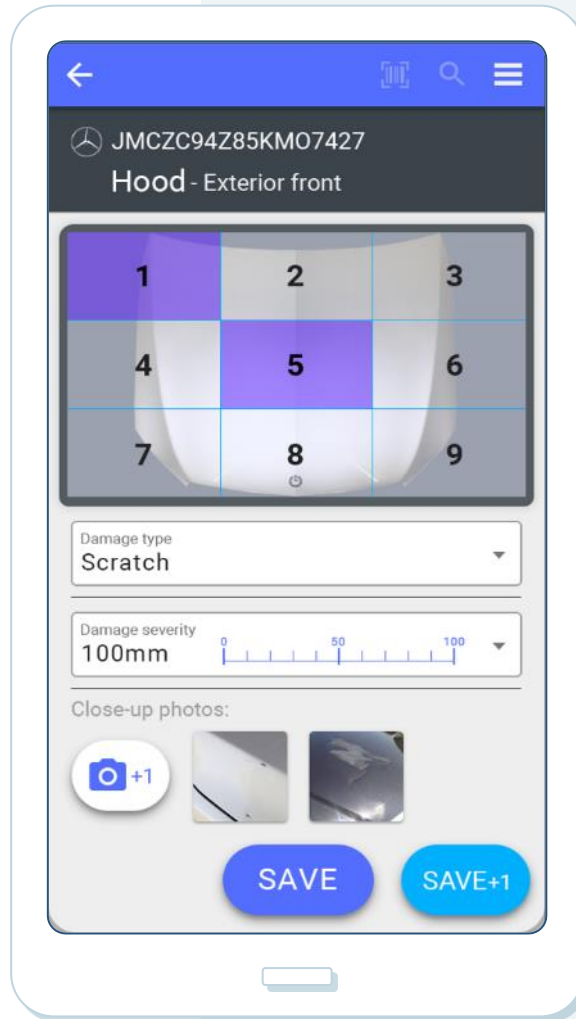
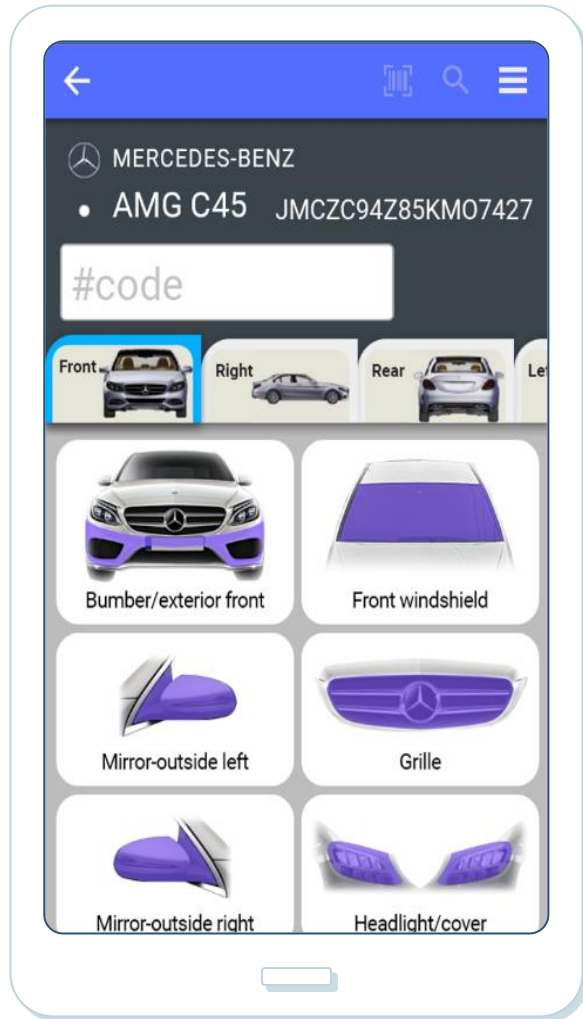
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Interfaces for mobile devices



- Acceptance of different types of cargo from vessel, truck and rail
- Registration of truck visits, vessel calls, train visits
- Registration of different yard operations
- Photo-fixation of damages, choosing the type of damage from the list, adding comments
- Scanning features
- Registration of internal operations (Inspection, Repairs, Customs operations)

Survey Mobile application



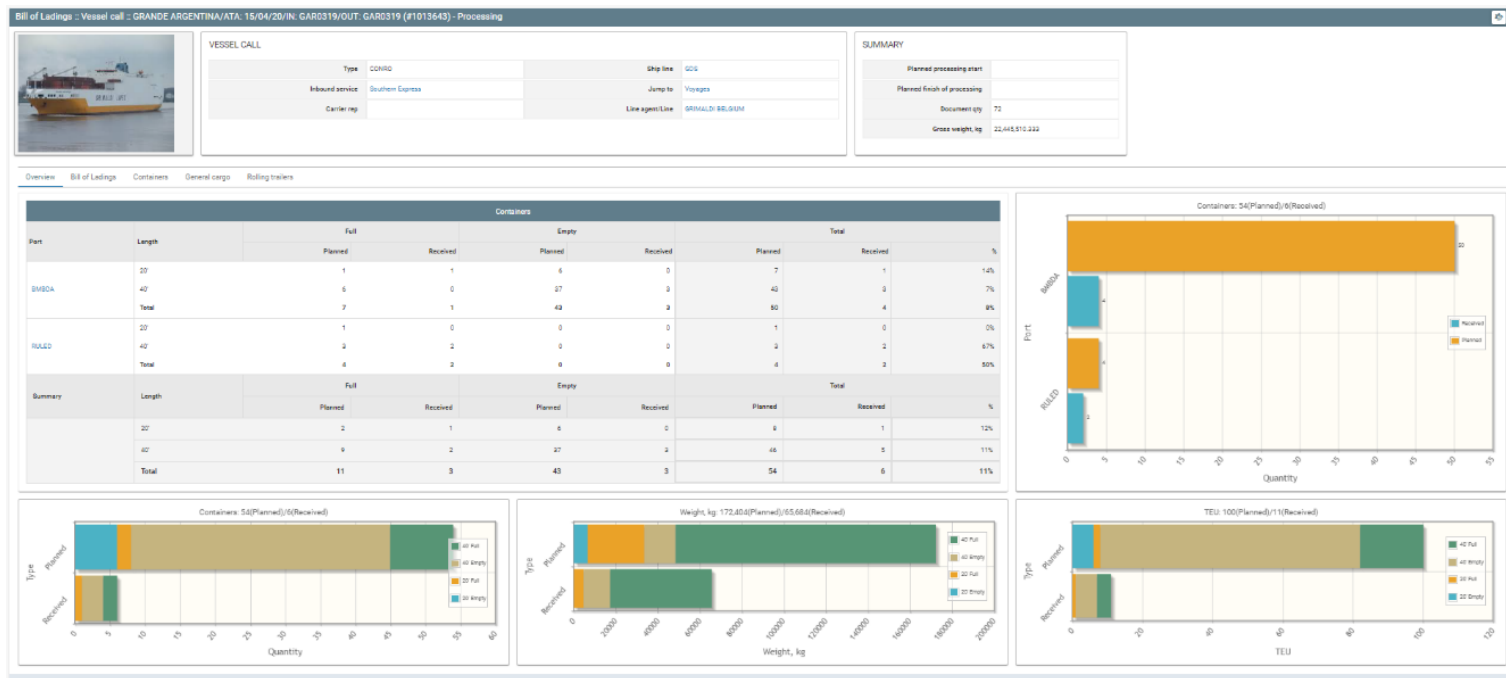
The application is based on the AIAG international standard.

The application has flexible settings and according to the weather conditions of the surveyor: before starting the shift it is necessary to set such parameters as time of day, weather conditions and vehicle condition: soiled, clean, snow/ice covered.

The main screen is divided into 3 parts: in the left part we see the instructions for the surveyor, instructions can be created for individual types of vehicles, for different models of cars and for each brand of car.

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Speeding up document flow processing



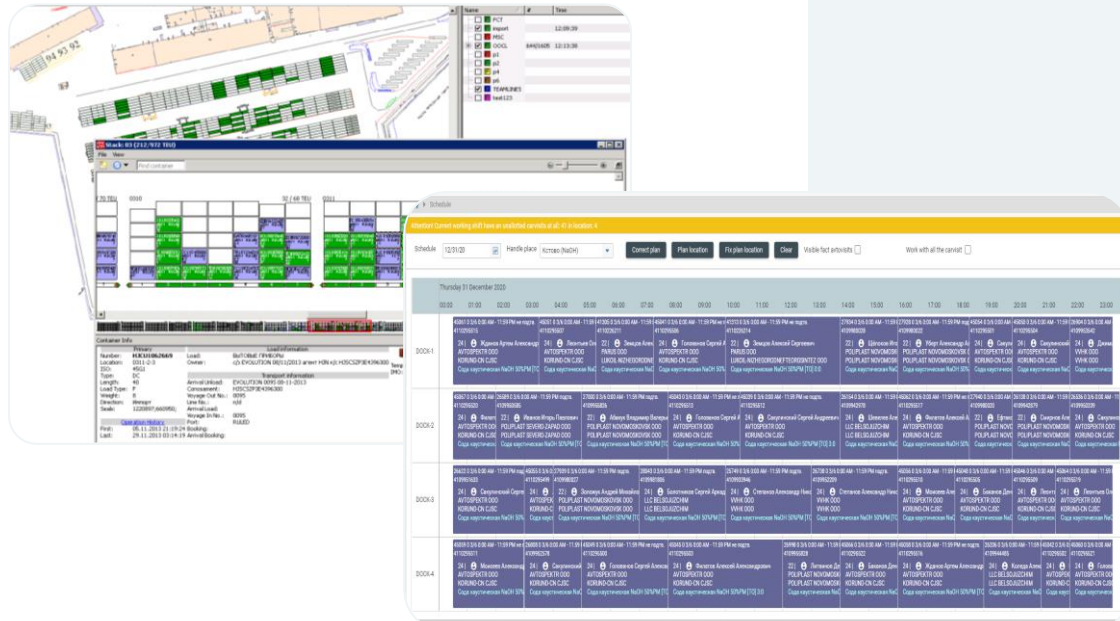
Information about the cargo is taken from documents uploaded in advance, such as bills of lading, bookings and service orders.

Further work on loading and unloading is based on the data obtained from these documents.

The system also allows to visualize statistical data and present them as graphs and charts.

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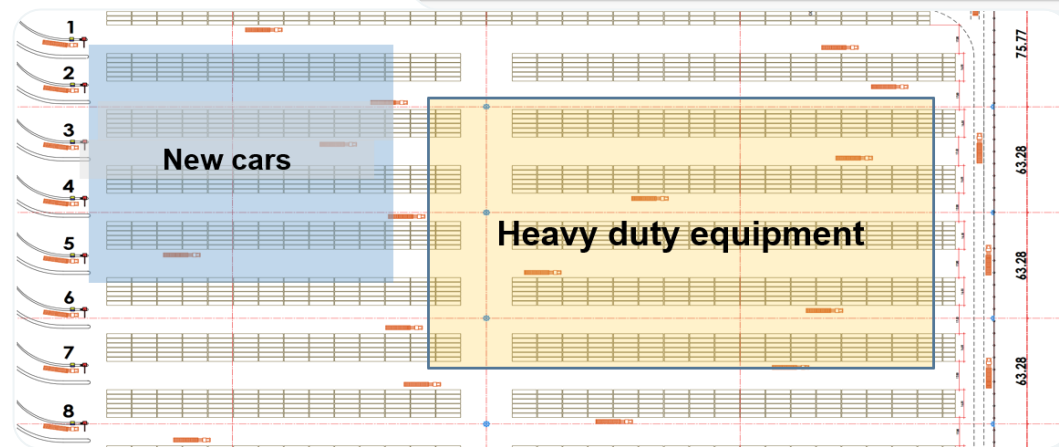
Yard Management



WTM: Graphic terminal layout viewer and editor is used to manage CHEs in the yard and plan routes. The port layout can be viewed and managed in real time allowing to establish a tree-like structure of terminal locations, groups and zone occupancy: Display, edit positions of terminal objects; Monitor the actual level of terminal occupancy in real time; Monitor CHEs and workers in real time; Plan loads and much more.

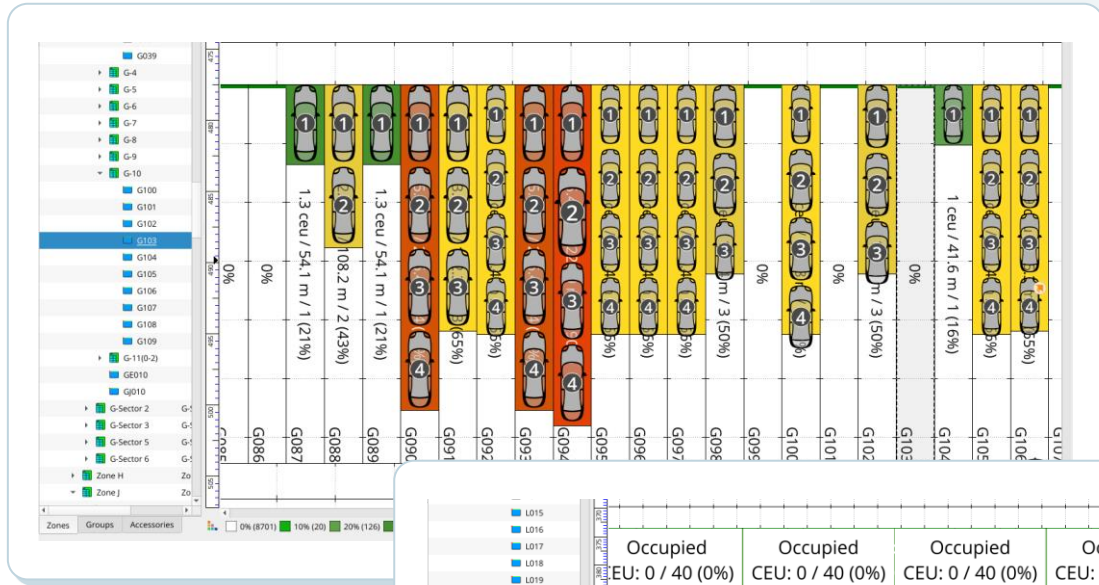
Dynamic stacking based on rules and strategies The core technology that the system uses to manage operations is automated work order generation based on predefined rules and strategies.

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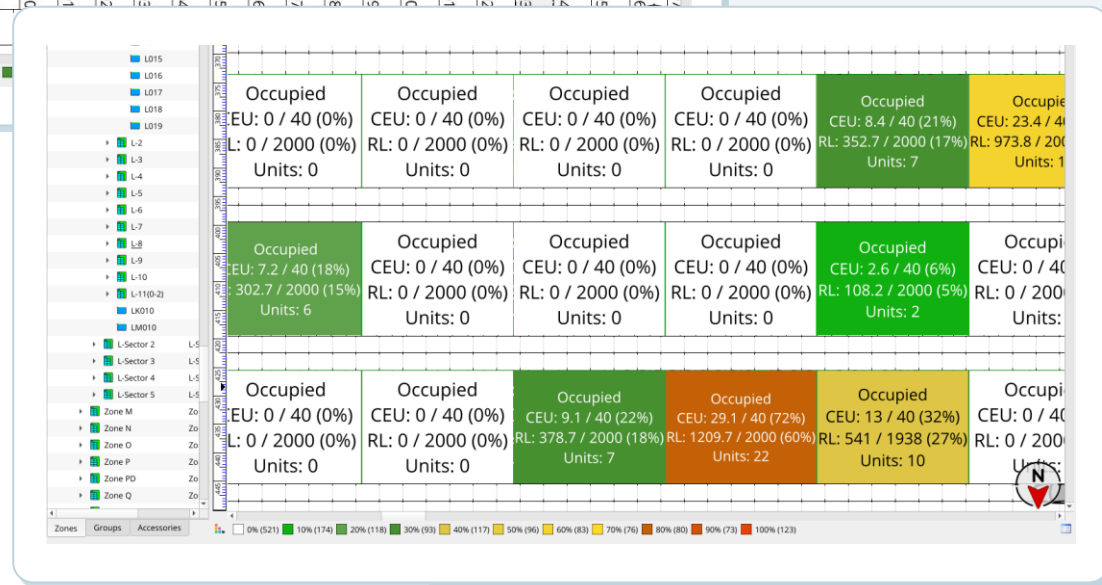


Dock scheduling The system also supports the automatic dock assignment function. But before docks can be assigned, planning must be completed. For this purpose, Solvo has developed a graphical interface, visually user-friendly, with which the operator can conduct planning, using drag and drop, and simply move the icons with the booked timeslots, by that optimizing the work of the yard.

Realtime visibility – yard assets



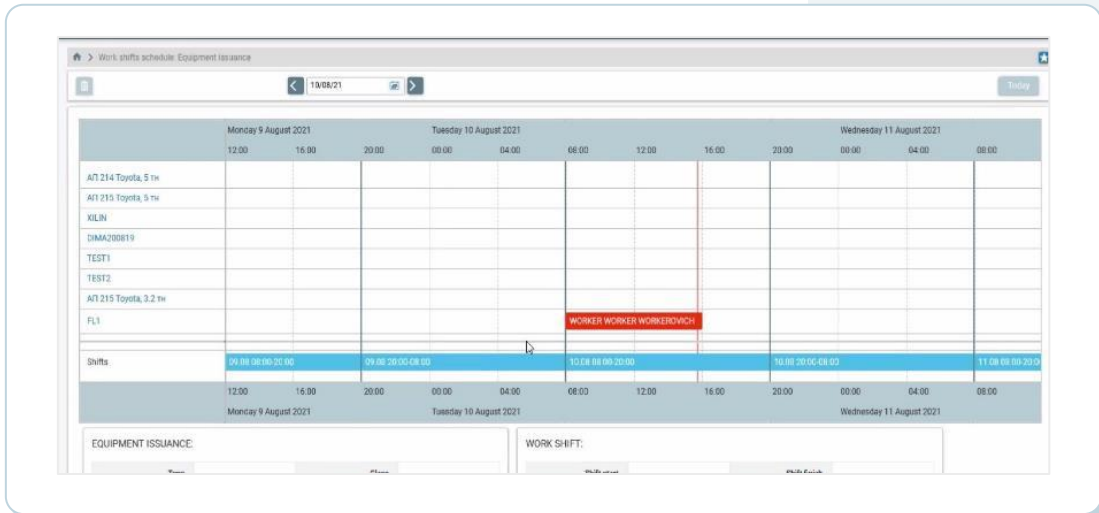
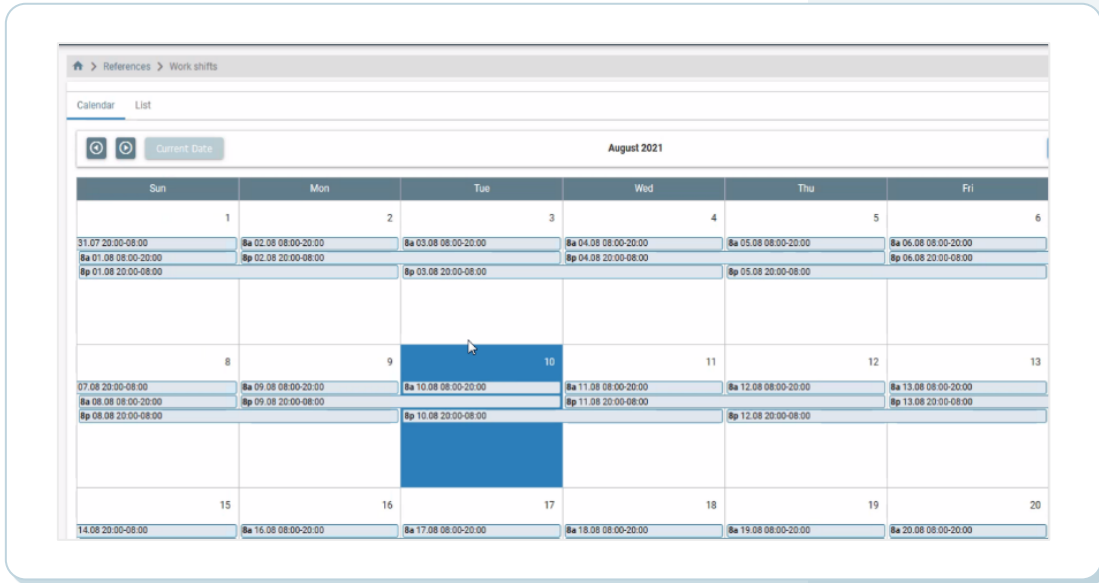
The graphical terminal layout offers a real-time bird's eye view, yard section and yard block views and helps dispatchers monitor all terminal operations in real time and take immediate action if needed.



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This is especially effective whenever yard equipment units such as RTGs use GPS transmitters. In this case dispatchers can monitor all actions as they actually take place with no delay. The GUI is customizable with regard to displayed information and design

Personnel & Equipment productivity



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The dispatcher plan in advance and then controls the execution of the work-orders, using an interactive terminal map and data received in real time from RDT mounted on vehicles or held by tallymen.

Thanks to aggregating data and reports on employee productivity – either individually or for groups – the system provides visibility where terminals are allocating their labor budgets and help them to optimize human assets.

Implementation efficiency

Client services

- **Accelerated transport** (truck, rail) processing at the terminal using preliminary data and time-slotting.
- **Enhanced customer-relationships** with online, real-time data access.
- **Improved control** with direct commands to vehicle-mounted radio data terminals.
- **Complete traceability with operator** and CHE driver history logging.
- **Superior service quality** for freight owners with up-to-date container information.
- **Increase in labor productivity by 20-30%**. The number of situations when staff cannot find goods in the warehouse is reduced to almost zero.

Operating costs

- **CHE optimization** with predefined routes and proven stacking strategies.
- **Rational equipment labor utilization.**
- **Elimination of unproductive moves, bottlenecks and decrease** in empty runs and stowage errors.
- **Conservation of fuel and energy**, reducing maintenance costs and increasing equipment lifespan.
- **The use of storage space is optimized** through the use of the right strategies for the placement of goods and the procedure of density and use of cells: the storage capacity is increased by 5 to 25%.

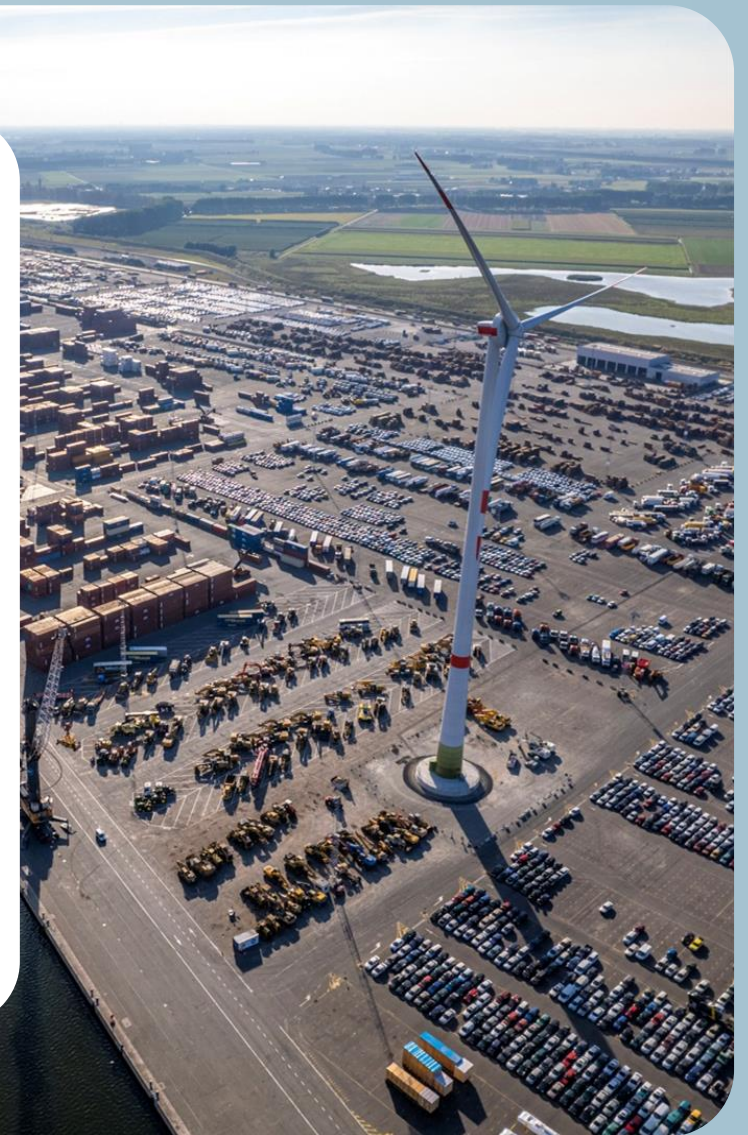
Logistics

- **Streamlined and optimized mechanical processes** involved in cargo flow at the terminal.
- **Complete control** over cargo flow
- **Maximum space utilization**, increasing from 5 to 20% (depending on area type).
- **Locate containers** faster and with higher precision.
- **Optimized and pre-defined cargo stacking strategies** to reduce reshuffles and costly moves.
- **The use of storage space is optimized** through the use of the right strategies for the placement of goods and the procedure of density and use of cells: the storage capacity is increased by 5 to 25%.

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Automation results

- Increase cargo handling efficiency & terminal throughput
- Increase personnel & equipment productivity
- Improve transparency of technological and commercial processes
- Increase in load handling speed in the storage zone
- Reduction in re-handles (non-productive container moves)
- Eliminating human factor
- Improving health and safety ops
- Finding efficiencies in processes and logistics
- Improving margins
- Reducing operating costs





The solution is here!

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