

Modern Comprehensive IT Solutions for Managing and Optimizing Handling Operations **with Different Cargo Types at Marine and Railway Terminal**

Giovanni Migliaccio,
Vice President Sales & Marketing



About Solvo

30+

**years
experience**



24/7/365 support



5 offices worldwide



400+ projects



SOLVO is successfully certified on ISO 9001:2000 certification, compliant with ISO 27001 , SOLVO.TOS and SOLVO.WMS systems are included in the widely acclaimed international Fraunhofer IML and CML directories, undergoing regular re-validation process.

Business core areas



Solutions for ports and terminals

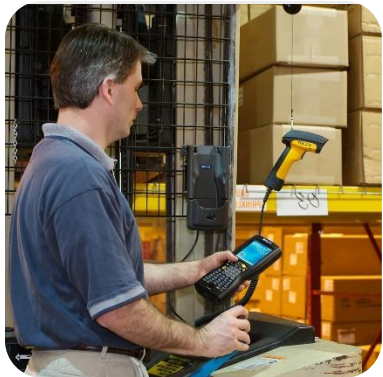
A leading Terminal Operating System for ports and terminals. An ultimate set of solutions for managing just any type of cargo: container, break bulk, Ro-Ro, general cargo, etc., including extra solutions as the VBS, AGMS, VGM.



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.

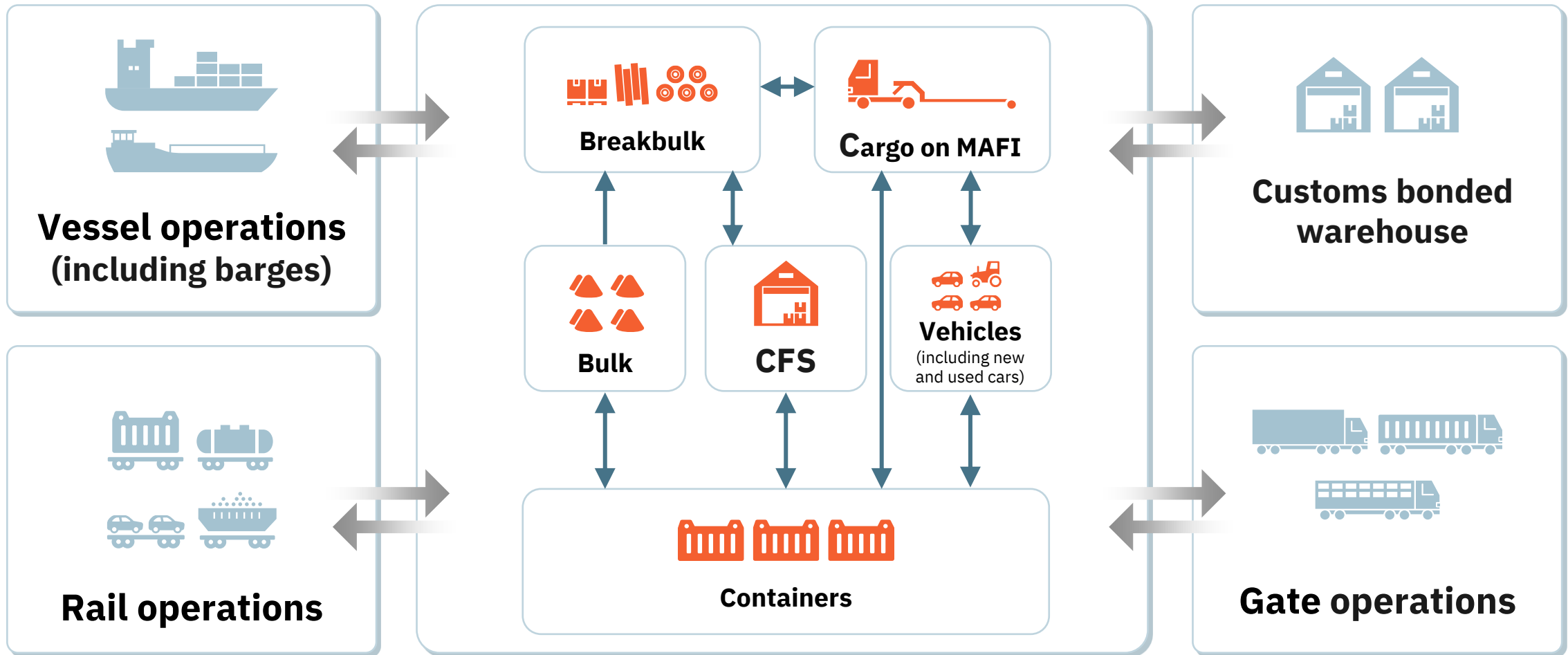


Consultancy in logistics and system integration

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

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

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

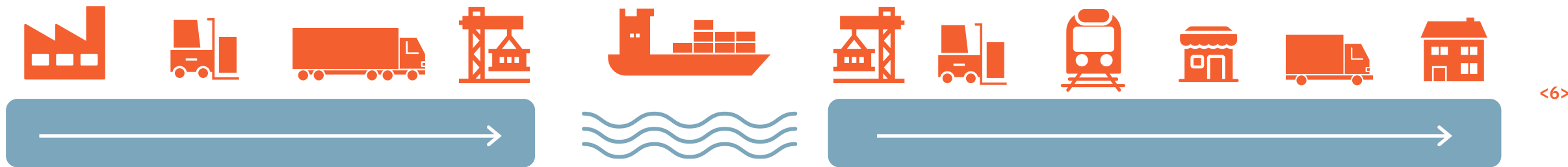


Crane systems STS, RTG/RMG, RTLS/DGPS

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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

Ready-made solutions **for the Middle East**



Electronic data exchange between terminals

Data on containers, vessel calls and bills of lading is transmitted automatically via web services in XML format.



A full-fledged Billing system

Module allows to keep records of mutual payments with counterparties, generate invoices for services rendered and other related documents, and automatically send invoices and reminders of debts to counterparties.

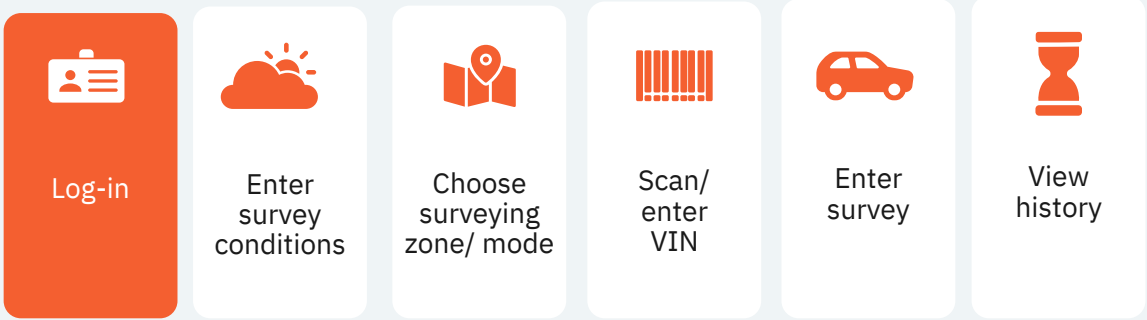
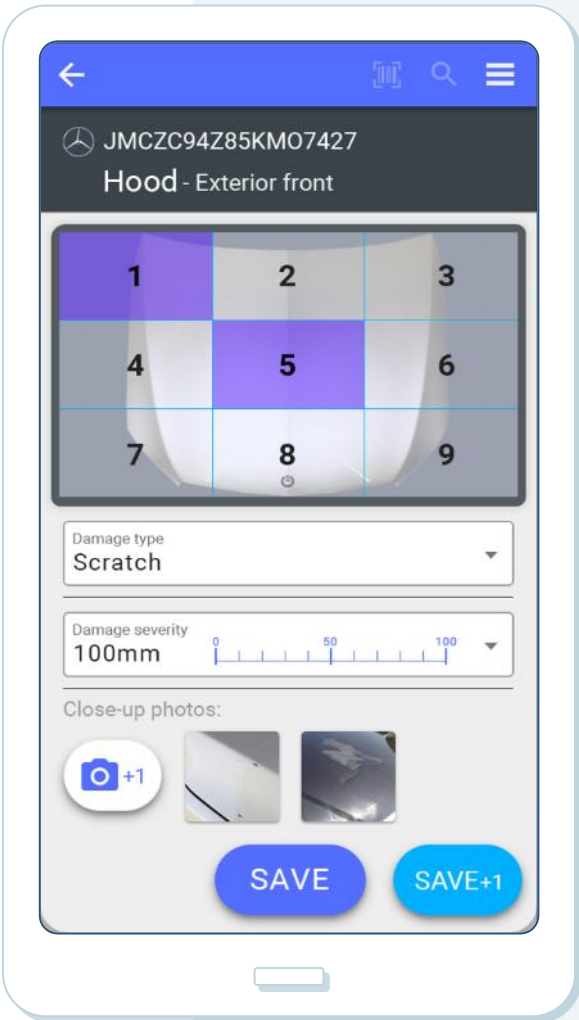
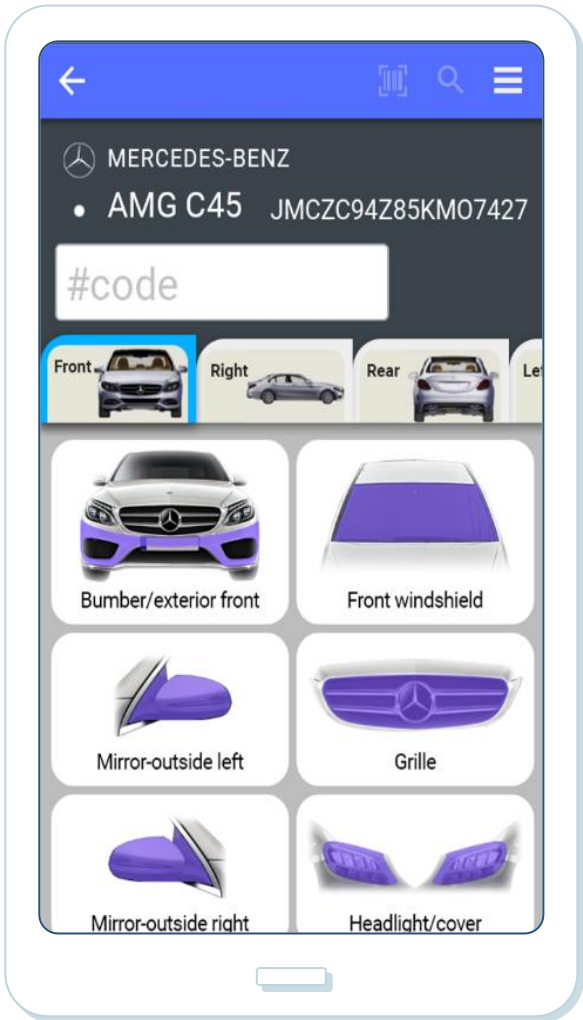


Handling of all types of cargo

The ability to manage all types of cargo within a single system: Containers, General Cargo, RoRo, Bulk, and Livestock

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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.

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Rail management

The system can perform automatic scheduling on the railroad, operating such data as:

Cargo information

Various types of documents, based on which loading and unloading of railcars is carried out



Railcars parameters

- Railcar Reference — Determines railcar length, owner, time to scheduled repair, etc.
- Railcar parameters: loaded from an external system, or filled in by the tallyman via RDT during registration
- Cargo putaway specifications

Planning, managing and **monitoring** the progress of loading / unloading trains based on ETA / ETD (estimated time of arrival / departure).



Optimization of container placement on the platform

#	Name	Status	Additional...	Date approved	Registry railway	Waggon class	Waggon
1092	MTU 13-644	Ready		8/10/20			
1074	MTU 13-9975	Ready		6/24/16			
1077	TU 40	Ready		7/18/18		40	
1078	TU 60	Ready		7/18/18			
1068	MTU 13-9781	Ready		11/6/12			
1050	TU 19,62	Ready		5/27/03			
1088	MTU baza 9300mm, 9720mm	Ready		5/15/20			
1087	MTU 13-1284	Ready		5/13/20			

Specification Details

#	Waggon class	Waggon ...	Waggon base ...	Waggon model	Loading configuration
1591	80				0400040
1592	80				2020202
1593	80				2004002
1594	80				2000002
1595	80				0002000
1596	80				0004000
1597	80				2004002
1598	80				2004002
1599	80				2020202
1600	80				2002002
1601	80				2002002
1604	80				2004002

Specification Detail Properties #1592

Specification #1068 of 06.11.2012 for MTU 13-9781

Name: punkt 4.2.2 Ris.3

Waggon class: 80Waggon type:

Waggon base , mm:Waggon model:

Location of containers on the waggon

Rules for distribution on the platform

Rules

The system generates a list of containers for loading, allows to plan the loading of cargo on the wagon, taking into account different characteristics and parameters.

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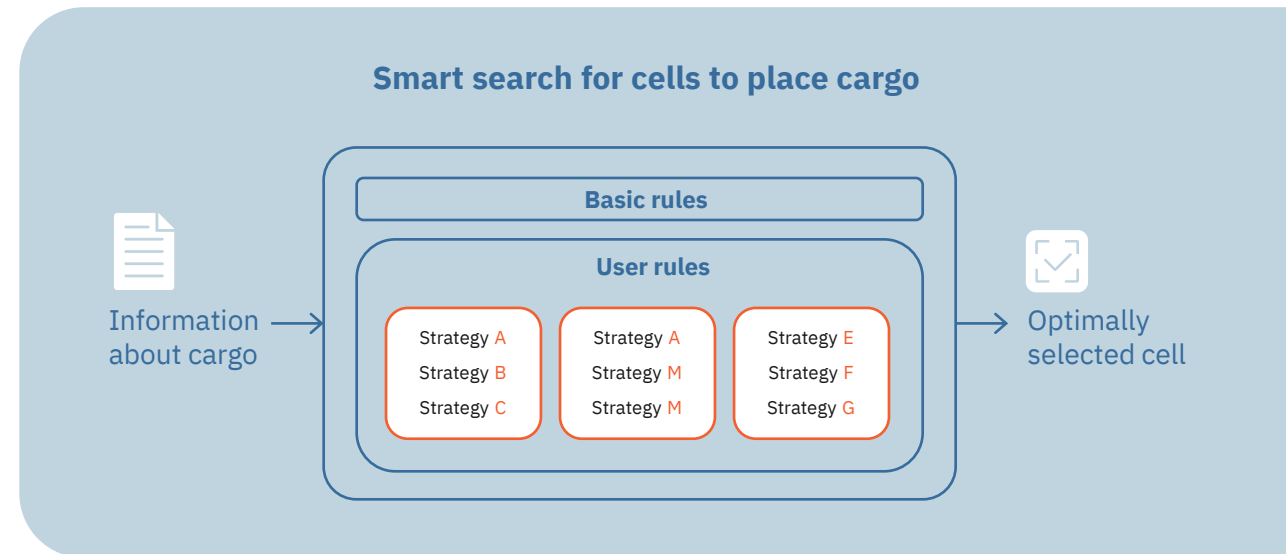
Solvo.TOS Intelligent Algorithms

Solvo.TOS includes the following intelligent tools:

- Container placement rules and strategies
- Unnumbered container scheduling rules
- Trailer loading and unloading priority rules
- Priorities and work assignment configuration for handling equipment
- And much more

When searching for cells to accommodate cargo, the system automatically selects a cell with the required parameters: its compatibility, size, type, filling order, and accessibility are taken into account.

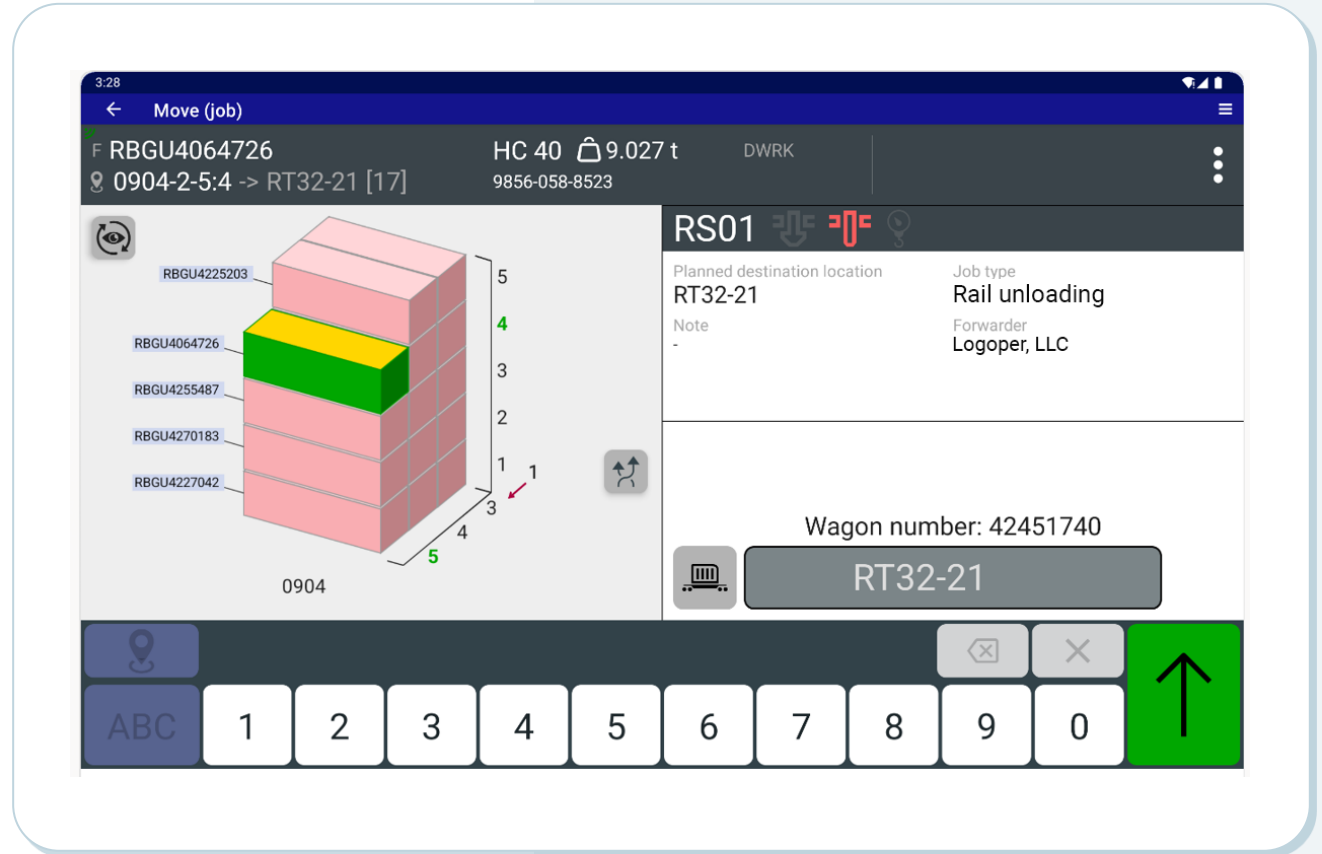
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3D Stack Visualization

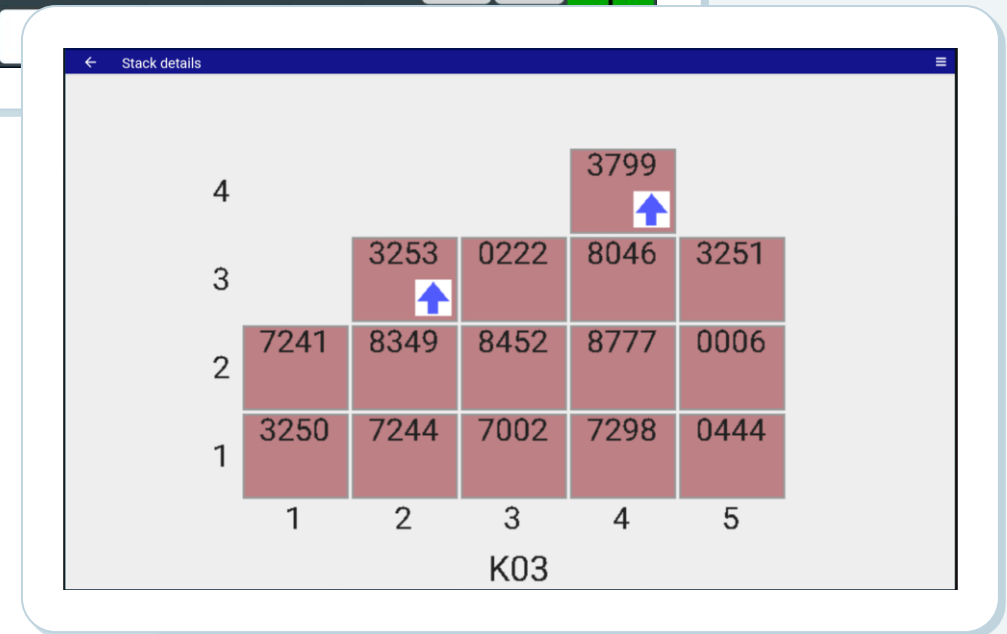
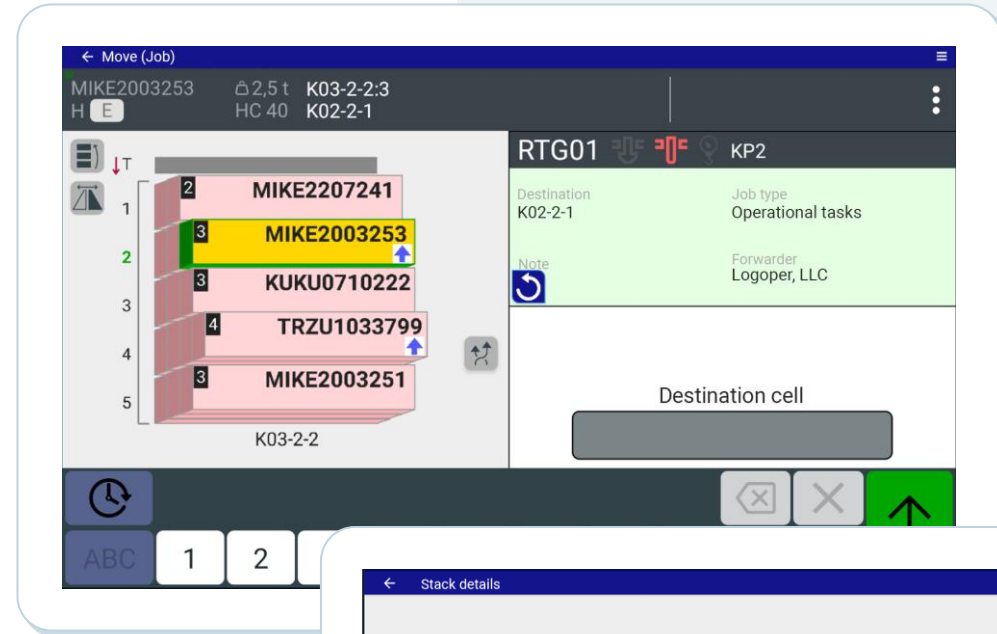
- Intuitive interface
- SMART search
- Customization options
- Push notifications

An interface that is clear at first glance and convenient from the first day of work



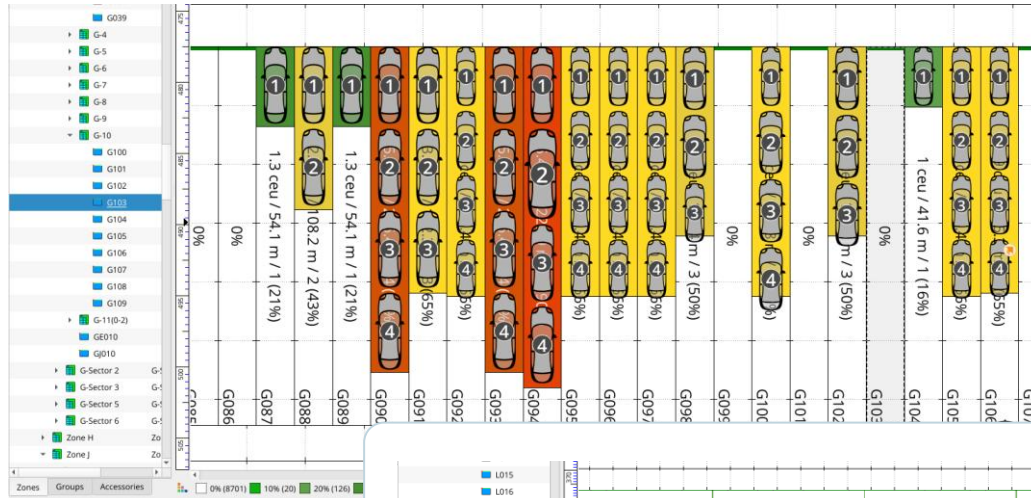
RTG|RMG operator mobile application

- 3D visualization
- The stack can be rotated relative to the operator.
- Additional information about the top-row containers can be displayed.
- The ability to obtain an alternative cross-sectional view of the stack has been added.

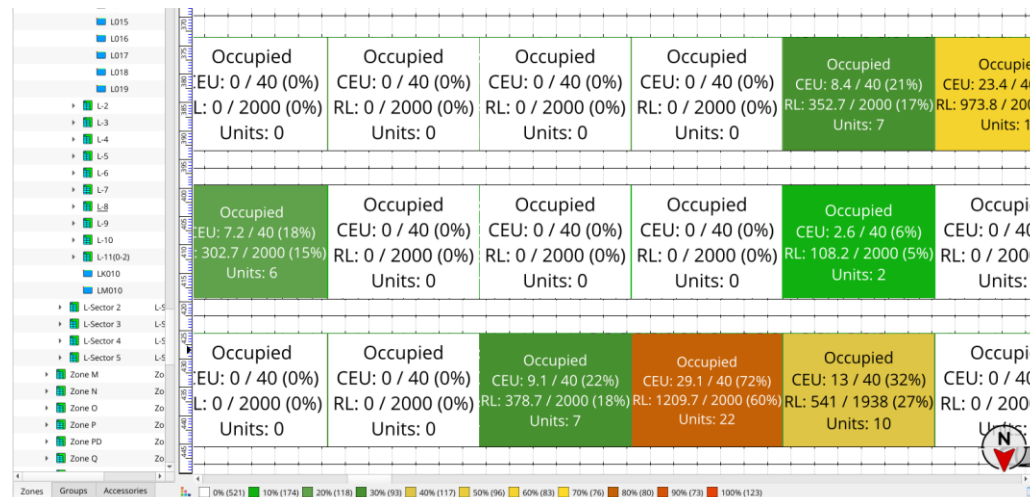


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Realtime visibility — yard assets

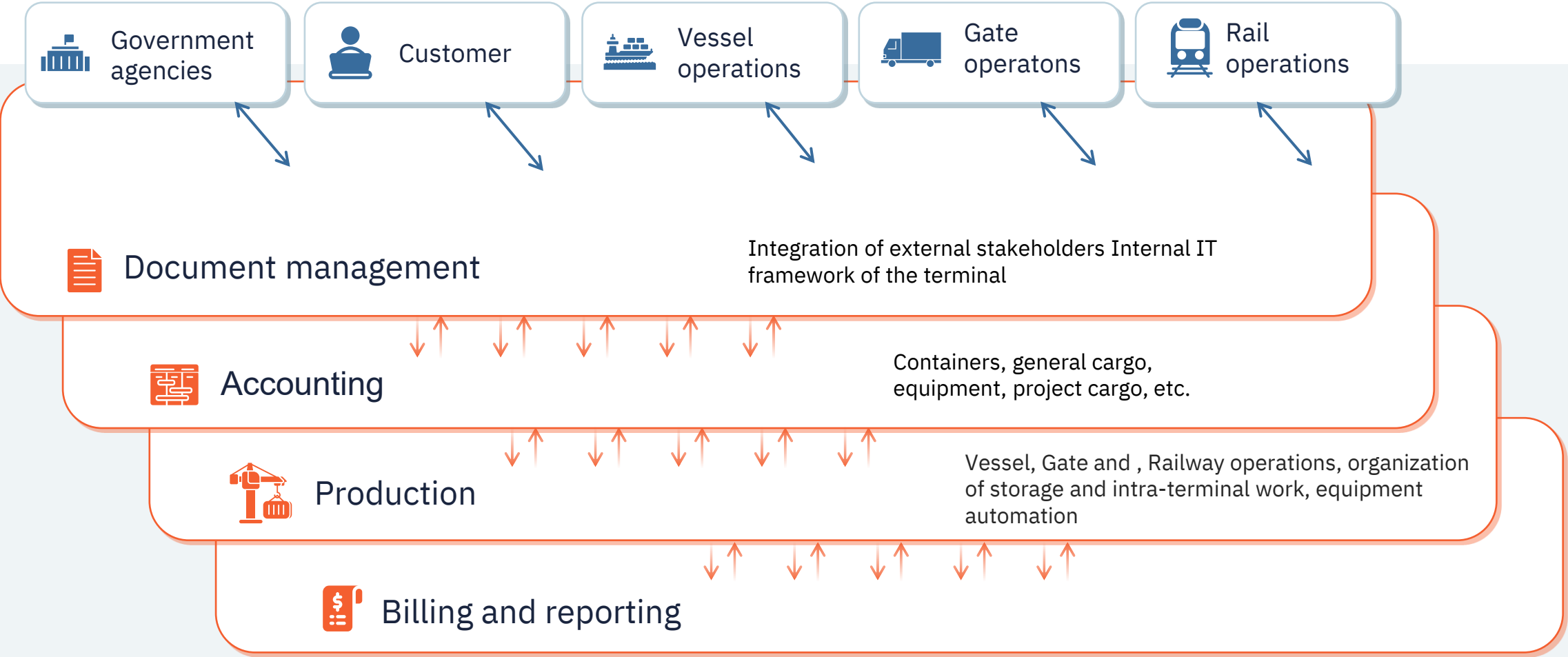


The graphical terminal layout offers a real-time bird's eye view, yard section and yard block views and helps dispatchers monitor all terminal operations in real time and take immediate action if needed.



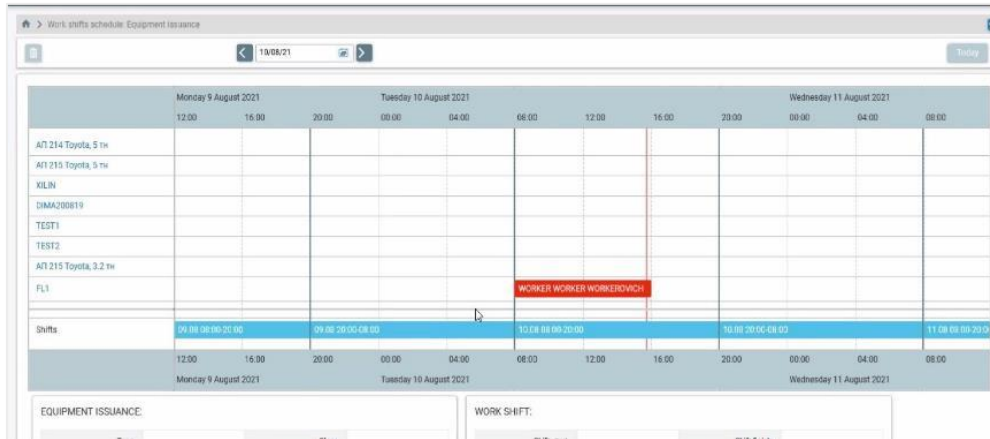
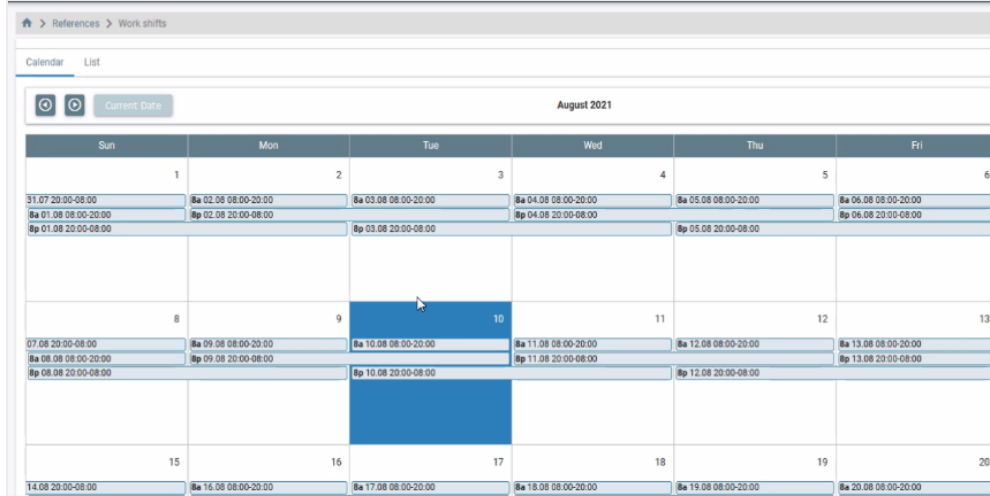
This is especially effective whenever yard equipment units such as RTGs use GPS transmitters. In this case dispatchers can monitor all actions as they actually take place with no delay. The GUI is customizable with regard to displayed information and design

Solvo.TOS Integrates with all participants in the supply chain



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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.

Solvo.TOS implementation results

40%

Reduction of unproductive operations

45%

Improving labor productivity

90%

Reduction of fines

30%

Reducing truck handling time



The solution is here!

Giovanni Migliaccio,
Vice President
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