Effective solutions for automating the Vessel and Railway operations of container terminals within a single IT ecosystem

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Vice President Sales & Marketing

About Solvo

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.

Ready for new challenges. We take on the most complex and specific projects that are beyond the power of others.

Work for result. Any project that we carry out, we bring to the end.

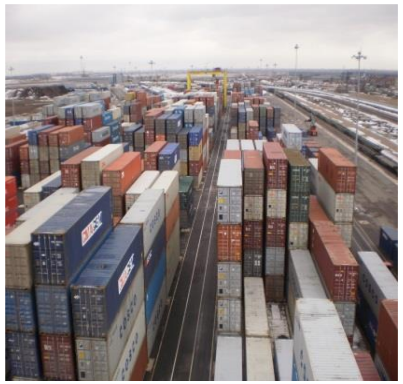
26 years experience

24/7/365 support

5 offices worldwide

400+ projects

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.

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.

SOLVO Europe B.V.

Multinational brands – SOLVO customers

400+ projects

Lifting Global Trade..
APM TERMINALS

msc
MEDITERRANEAN SHIPPING COMPANY

موانئ دبي العالمية
DP WORLD

CMA CGM

globalports™

Trans Container

Terminal Investment Limited SA

HHLA

Atria®

GRIMALDI LINES

ULS
UNIVERSAL LOGISTICS SERVICES

AB InBev

PEPSICO

MARS

Unilever

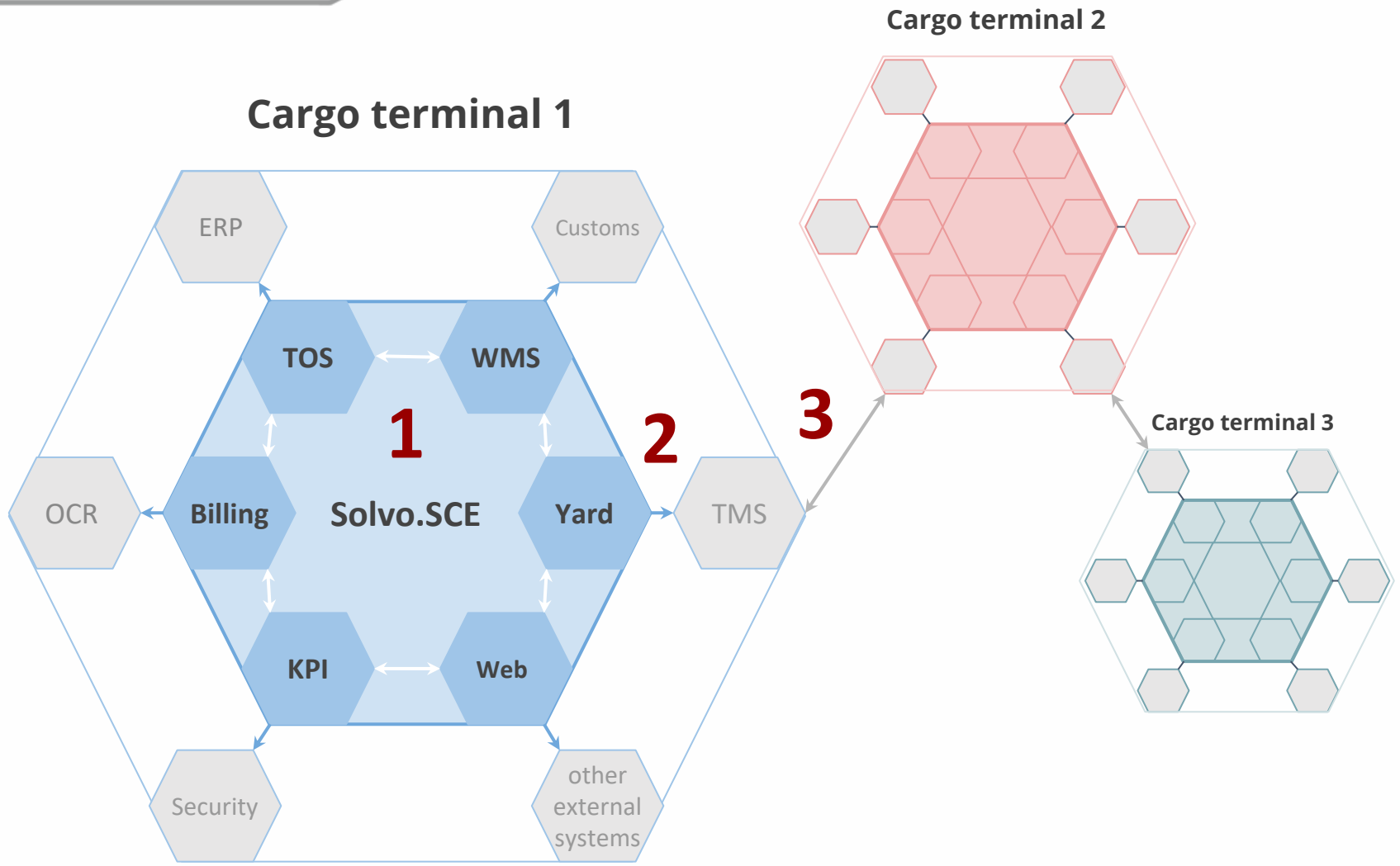
ROYAL CANIN

DPD

GRUPO INDUKERN

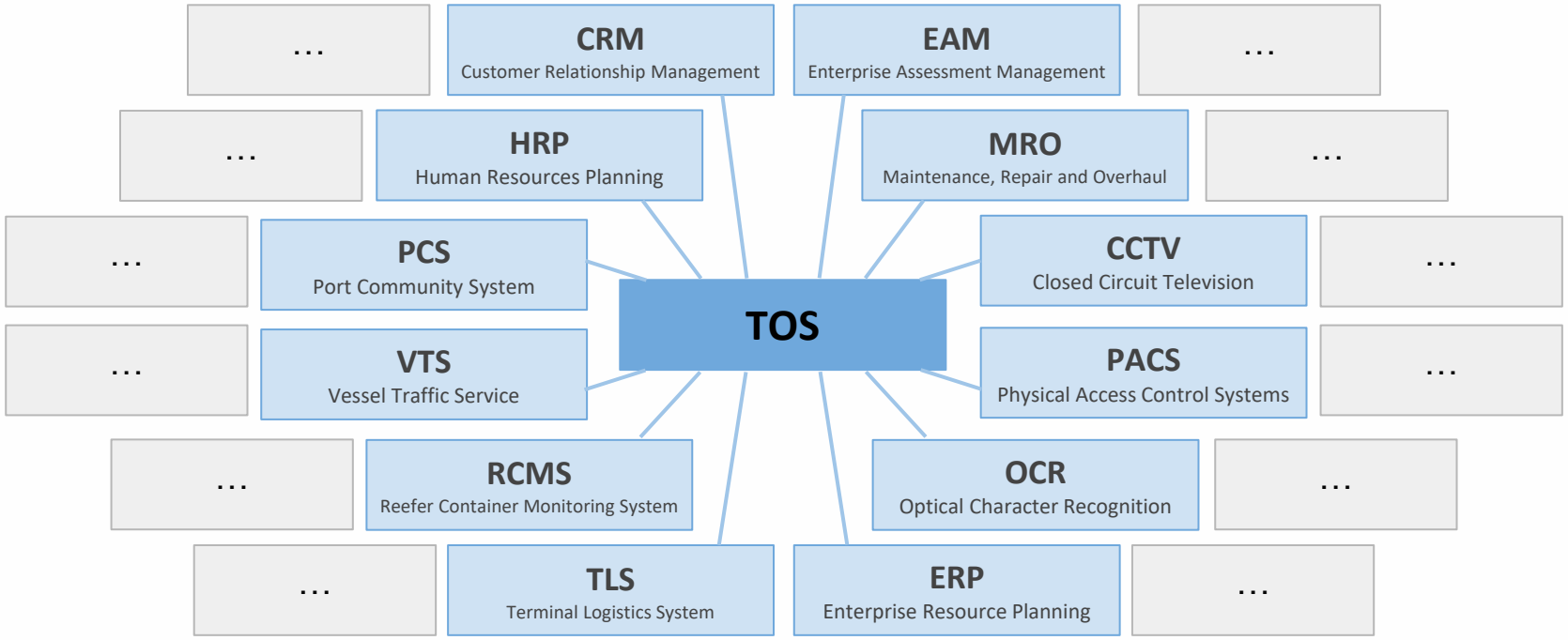
Carlsberg

System Integration Levels



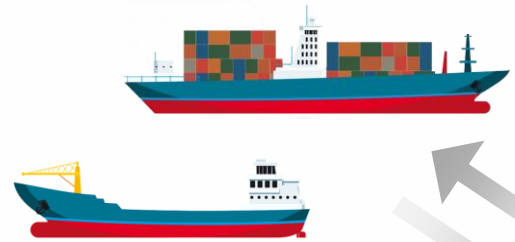
1. Solvo.SCE Platform based solutions (integration between Solvo products).
2. Integration between Solvo solutions and external software.
3. Integration between different logistics facilities or participants of the Global Supply Chain

Solvo.TOS Integration Opportunities



Solvo.API (Application Programming Interface) is devided 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.

Support of Complex Technological Chains



Vessel operations

Breakbulk

3PL

Bulk

Ro-Ro on MAFI

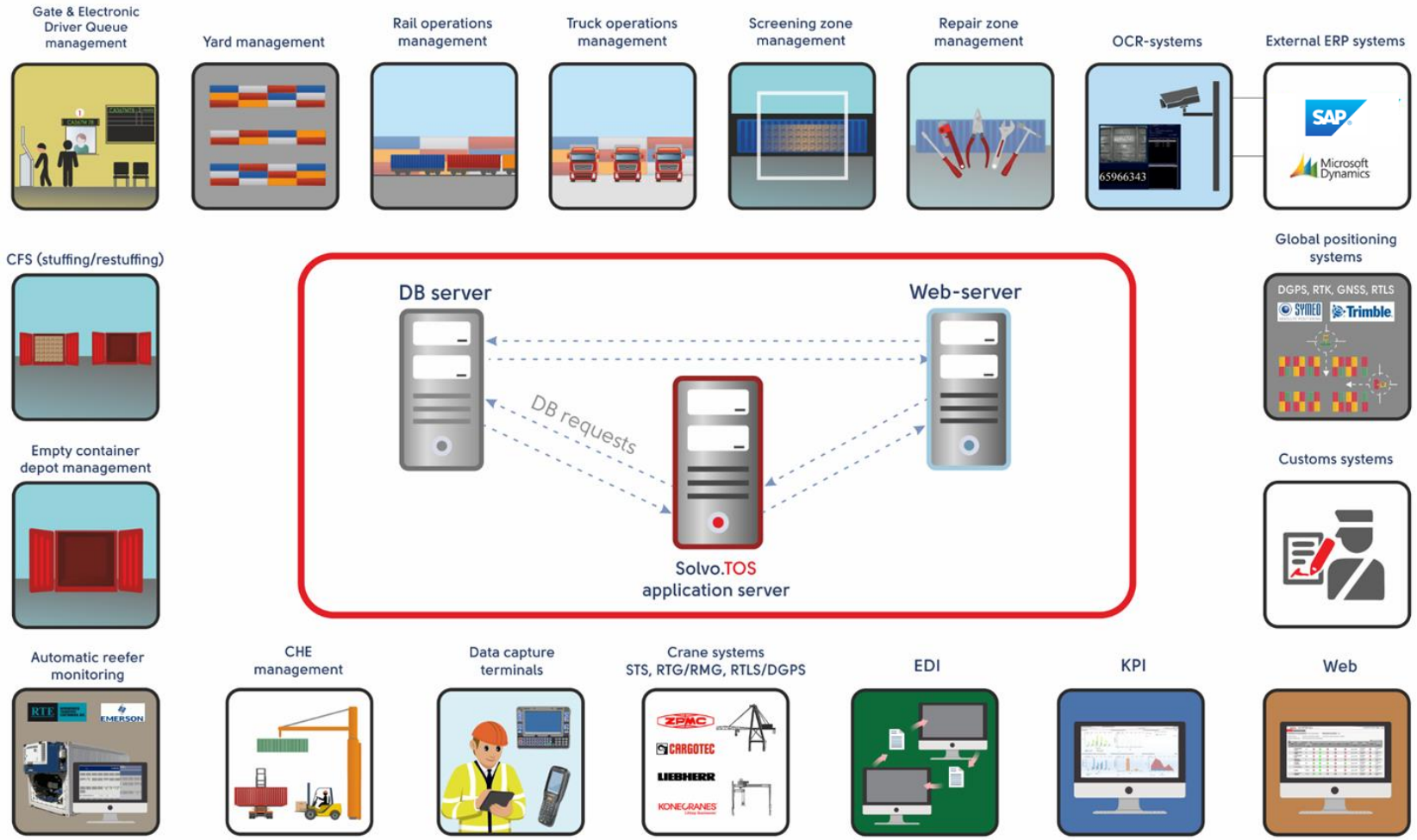
Vehicles

Containers

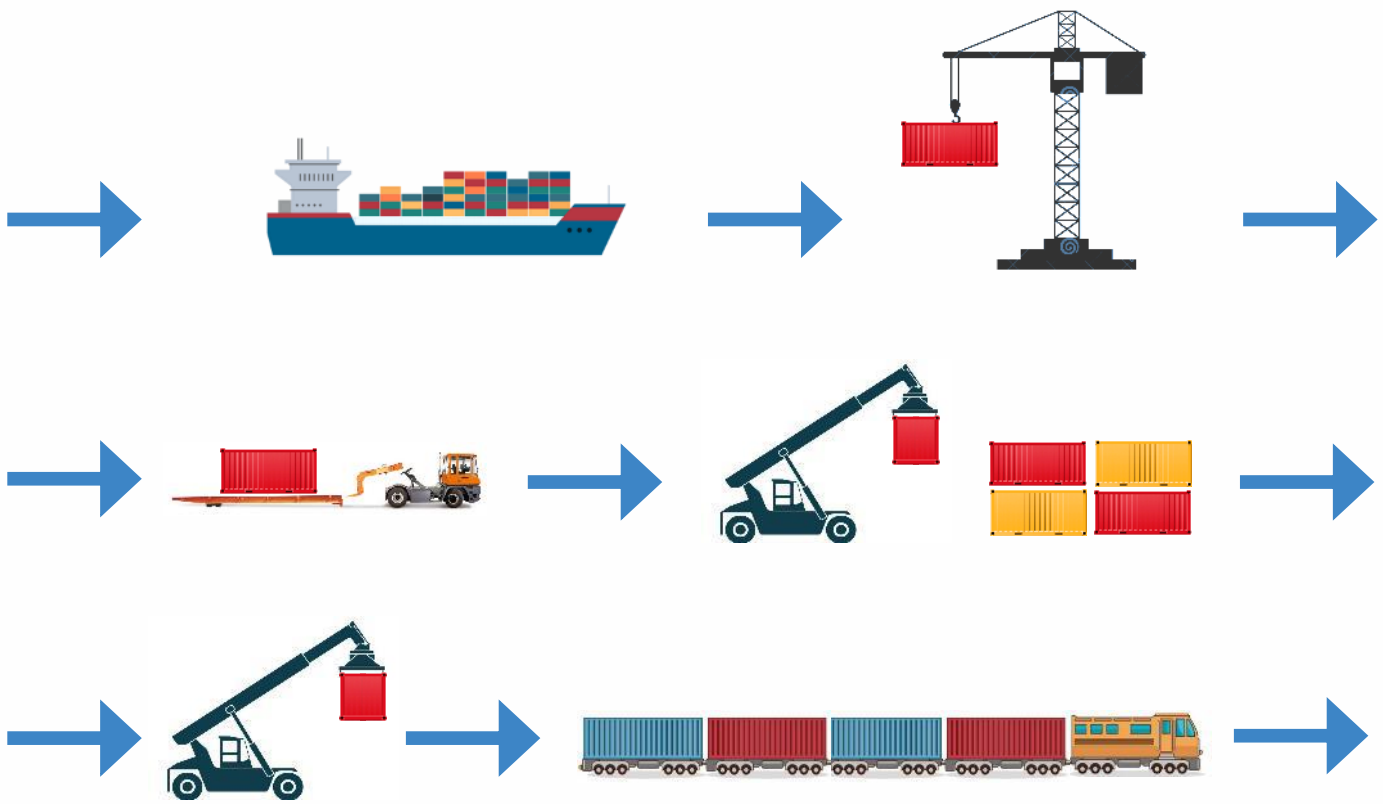
Rail operations

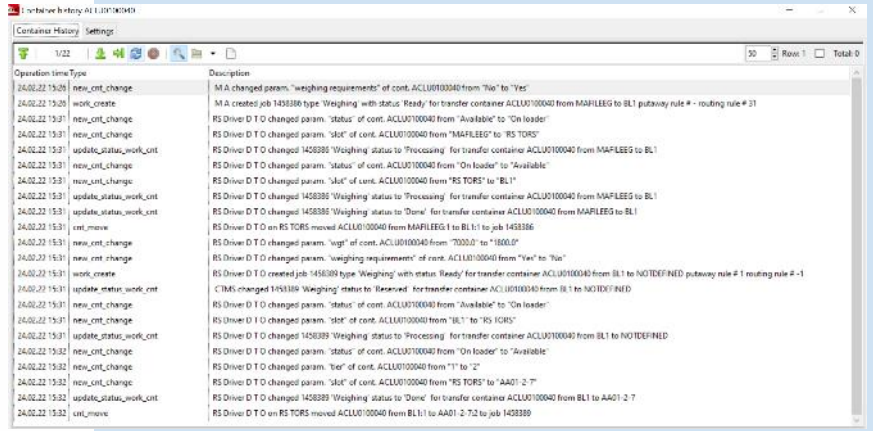
Gate operations

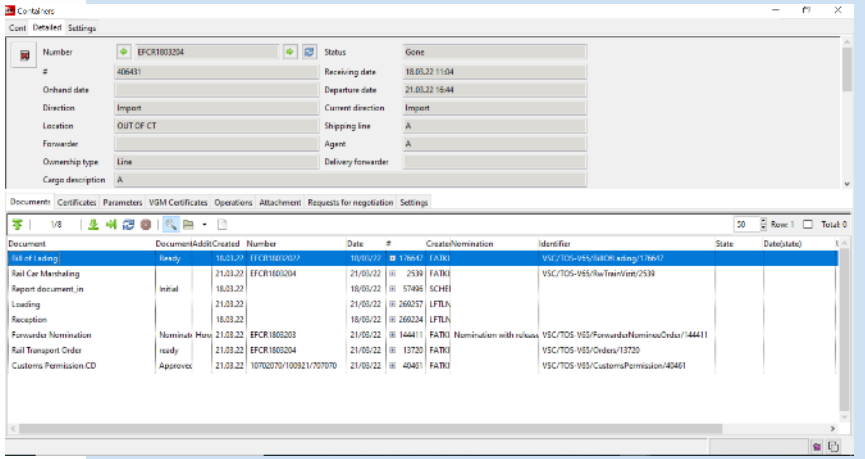
Solvo.TOS overview



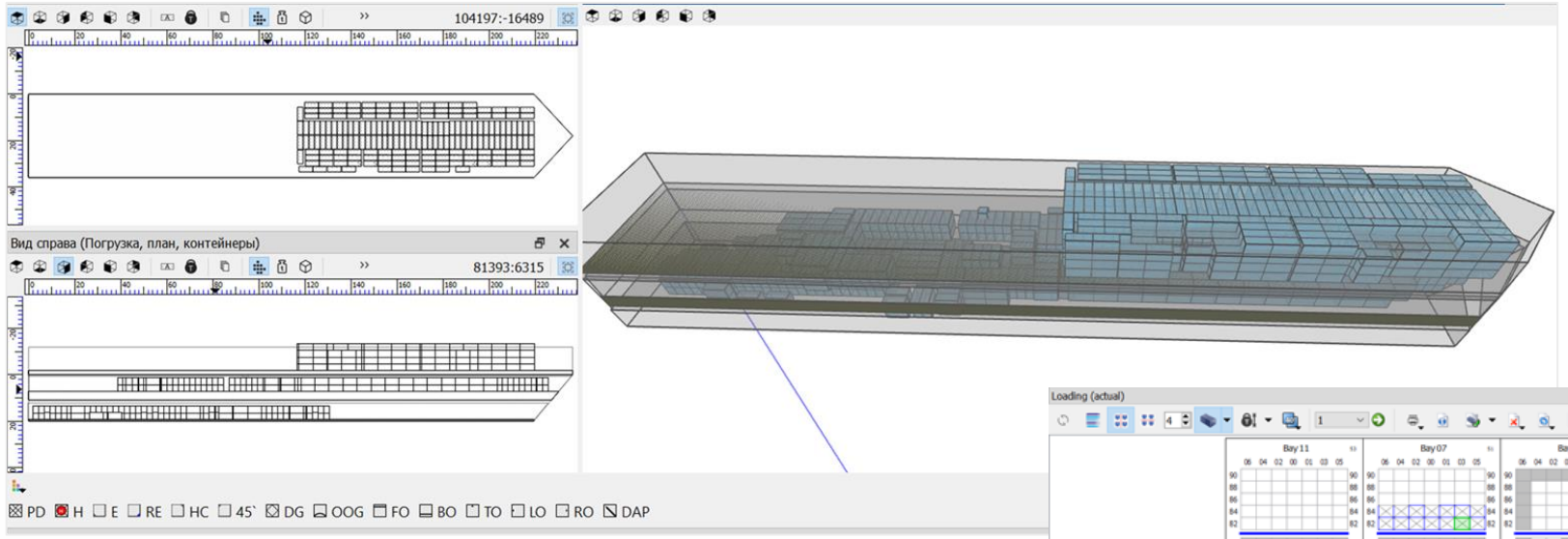
History of container handling operations

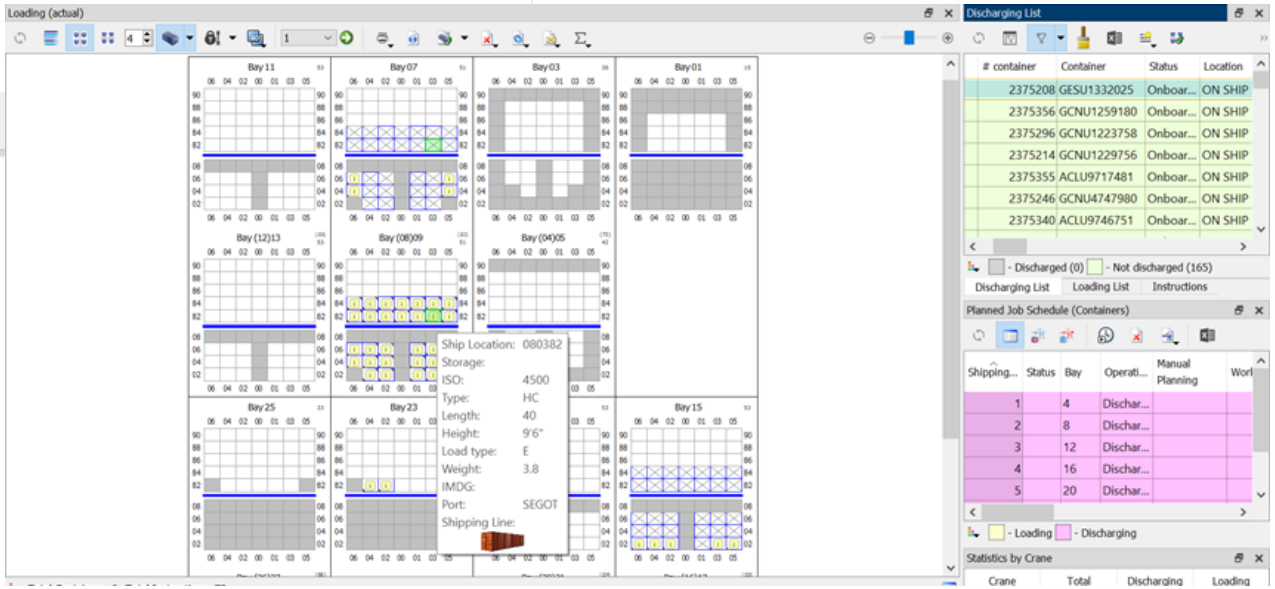






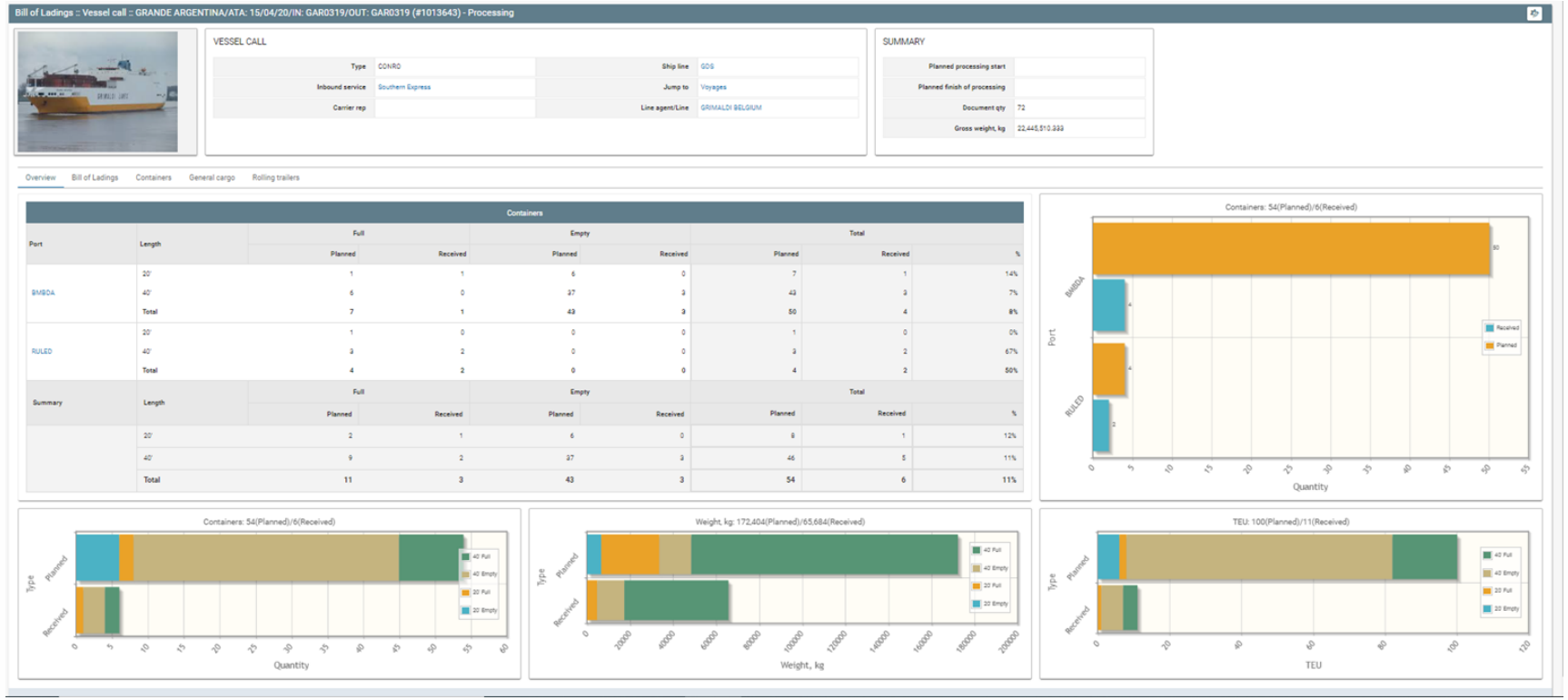
Advanced Vessel planning capabilities





The system has a wide range of options for planning vessel arrivals. With the help of tools such as the Cargo Planner and the Universal Vessel Planner it is possible to plan the loading and unloading of containers in the required order, taking into account the container characteristics and specifications. Once at the terminal, the container is recorded in the system and all of its further movements are registered in the system.

Speeding up document flow processing

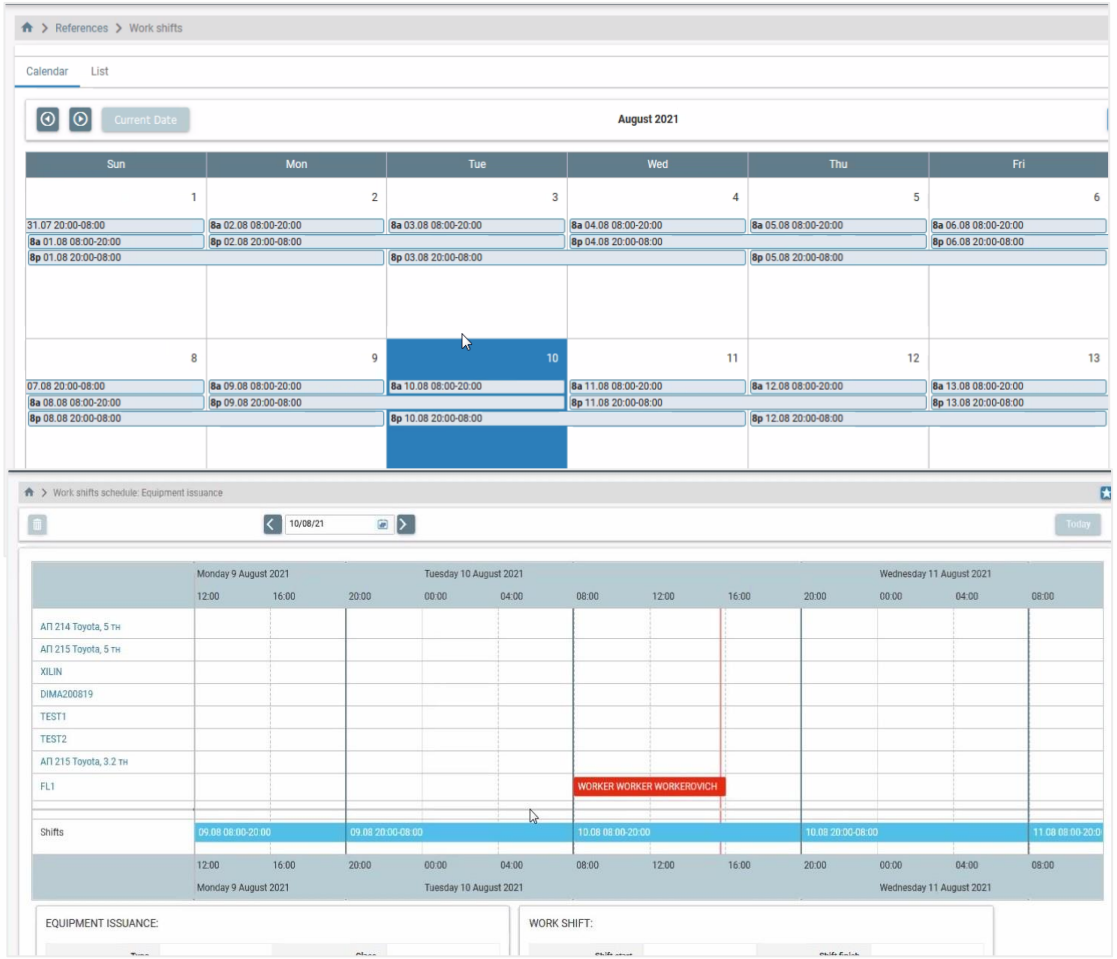


Information about the container is taken from documents uploaded in advance, such as bills of lading, bookings and service orders.

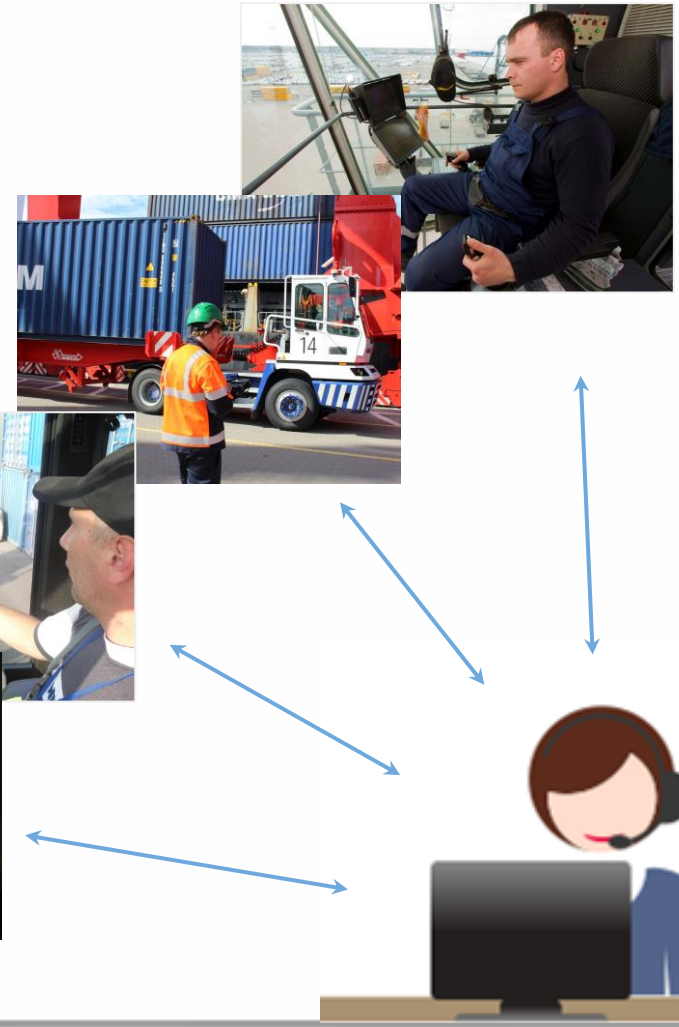
Further work on loading and unloading is based on the data obtained from these documents.

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

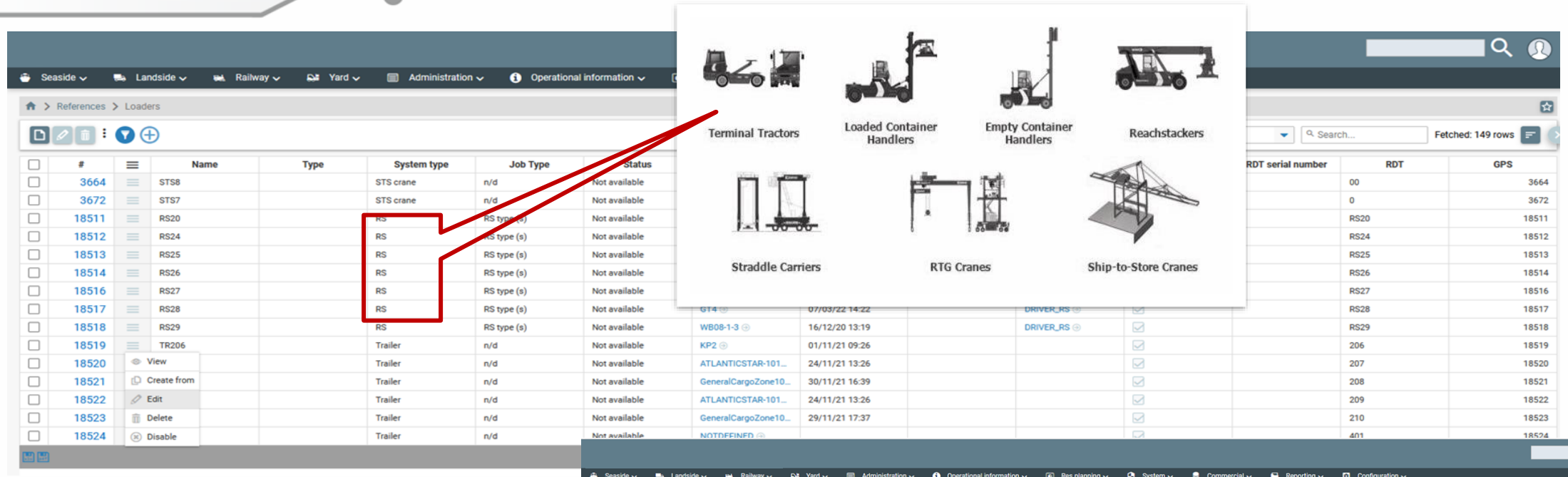
Personnel & equipment productivity

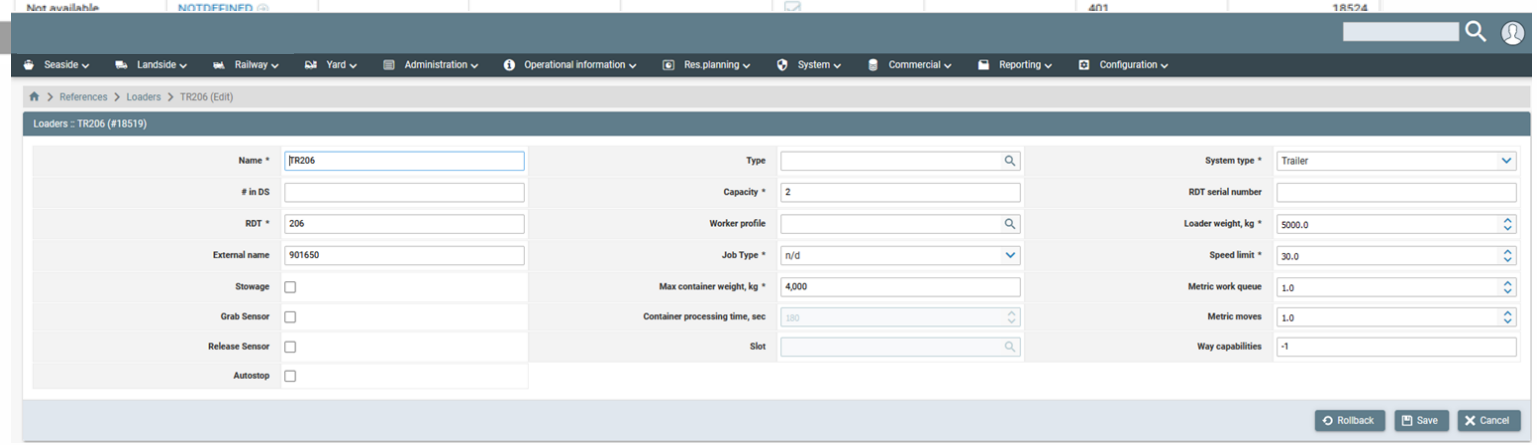


The dispatcher controls the execution of the work-order using an interactive terminal map and data received in real time from radio terminals mounted on vehicles or held by tallymen.



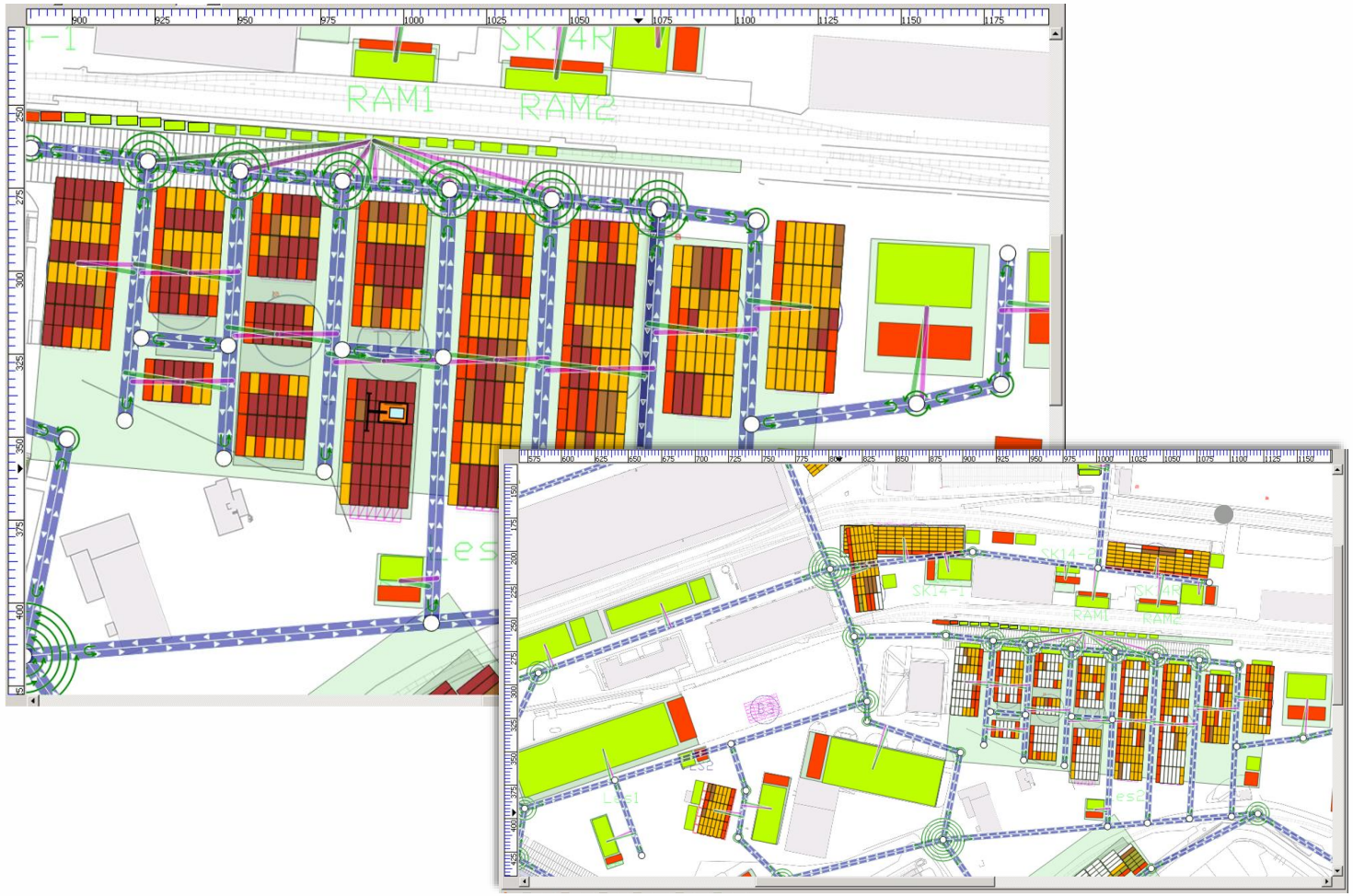
Supported types of equipment





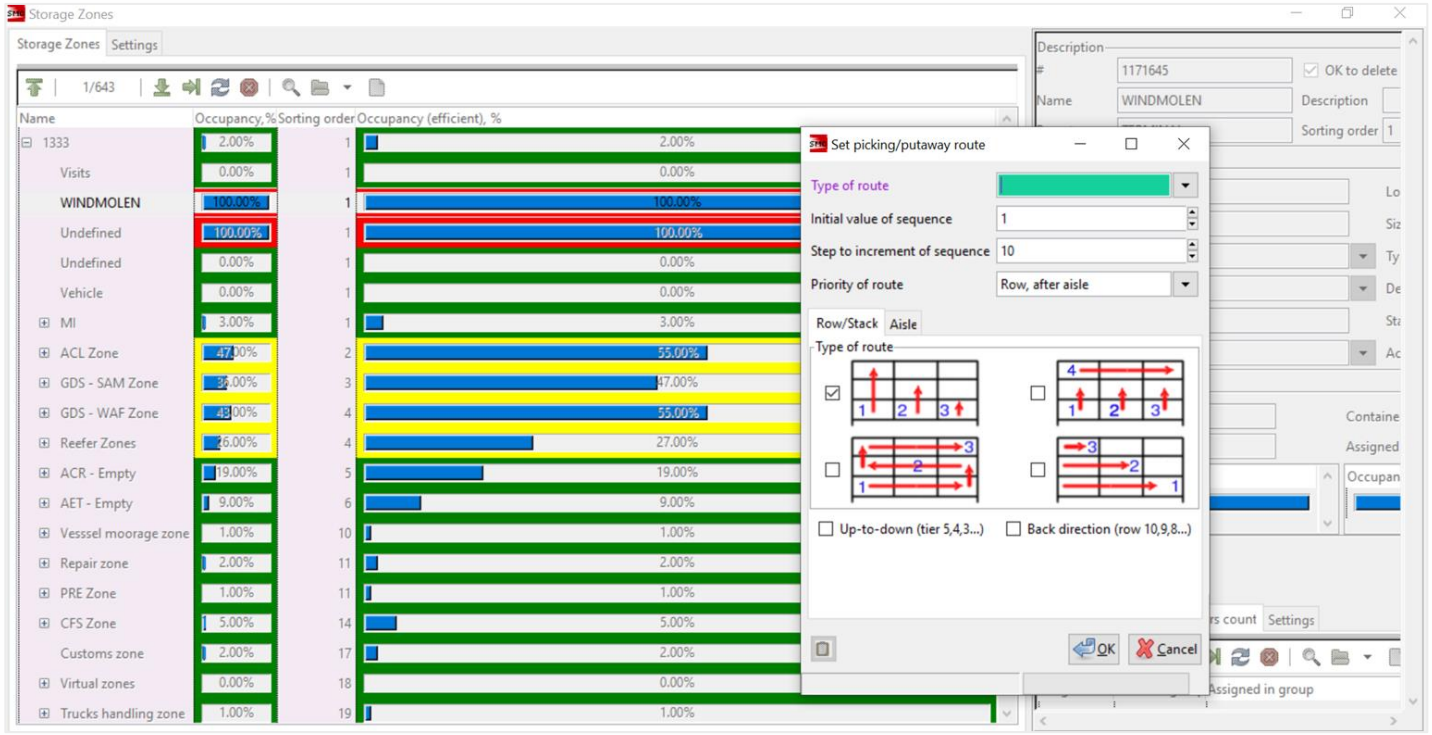
All terminal equipment can be managed by the system automatically according to the dynamic stacking rules and strategies.
You can view the list of assigned jobs. The system initiates a job to vehicle operators to place the container in the specified location.

CHE Accounting and assignment

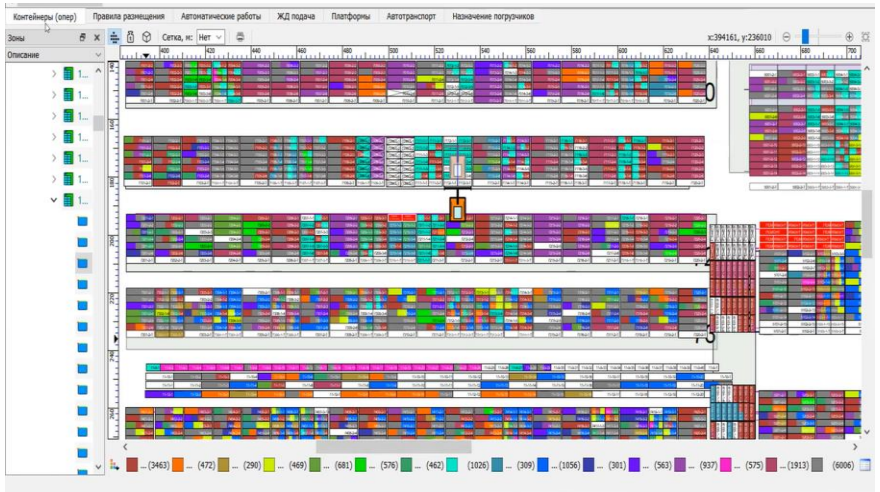


- The system analyzes the available data about the road network of the terminal and builds the optimal route for a MHE;
- The entry of road data is carried out through the roads editor function - part of the Real-time terminal layout viewer and editor;
- The user defines the key checkpoints, permitted turns and delays.
- The user can also then set the availability of a stack for processing from a selected road.

Dynamic stacking based on rules and strategies in the yard



The core technology that the system uses to manage operations is automated work order generation based on predefined rules and strategies. There are hundreds of strategies available in the system that may take into account thousands of parameters to make sure the putaway process for example is efficient and housekeeping is minimal.

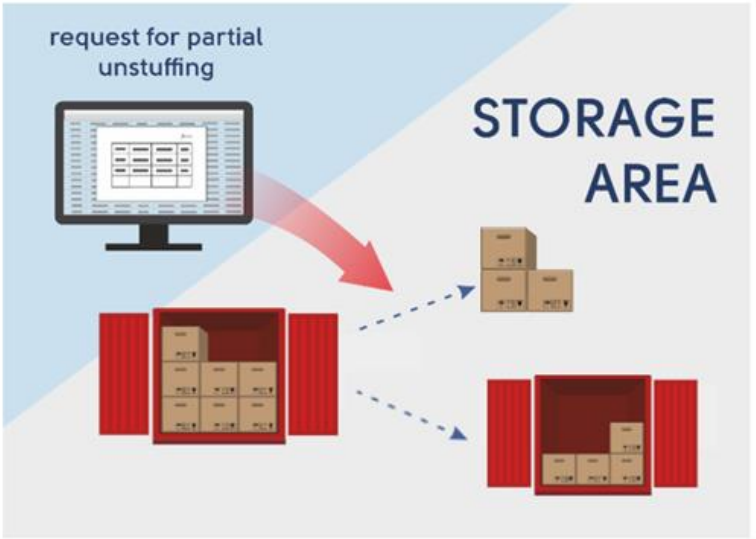


The system finds a stack for the container based on putaway rules.
For example, all MSC containers are to be placed in zone 1 of the yard storage area, while CMA containers go to the stacks in zone 2.

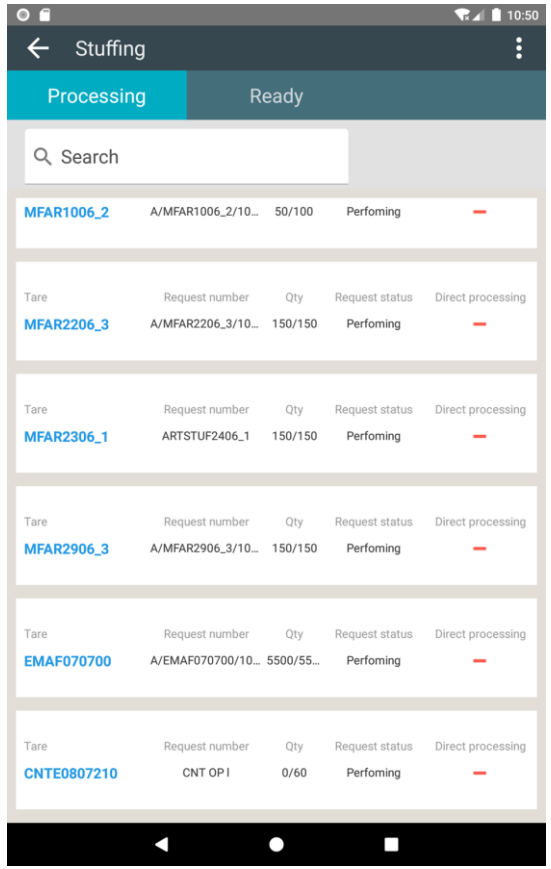
Stuffing and unstuffing

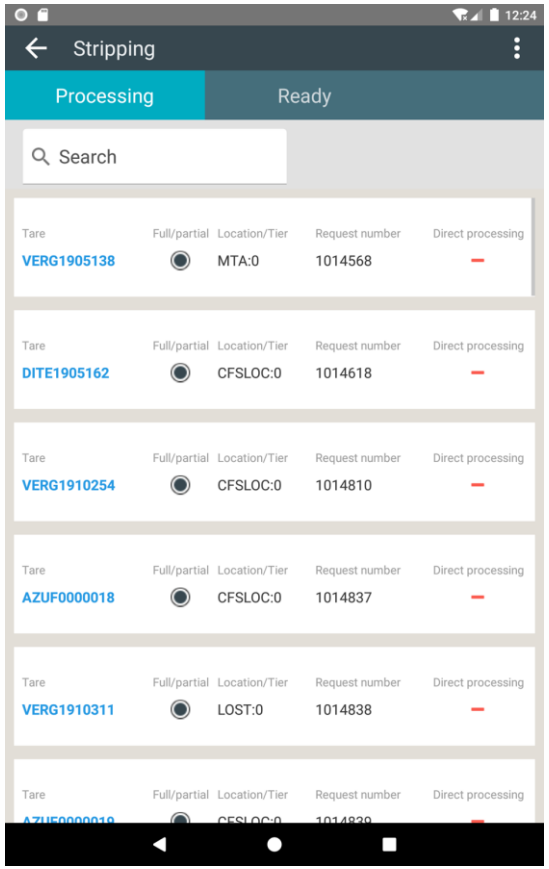
Performed based on requests. Requests can be filed by clients via the web-portal or by service-desk operators. The system supports partial container and GC + Ro-Ro stuffing/unstuffing.

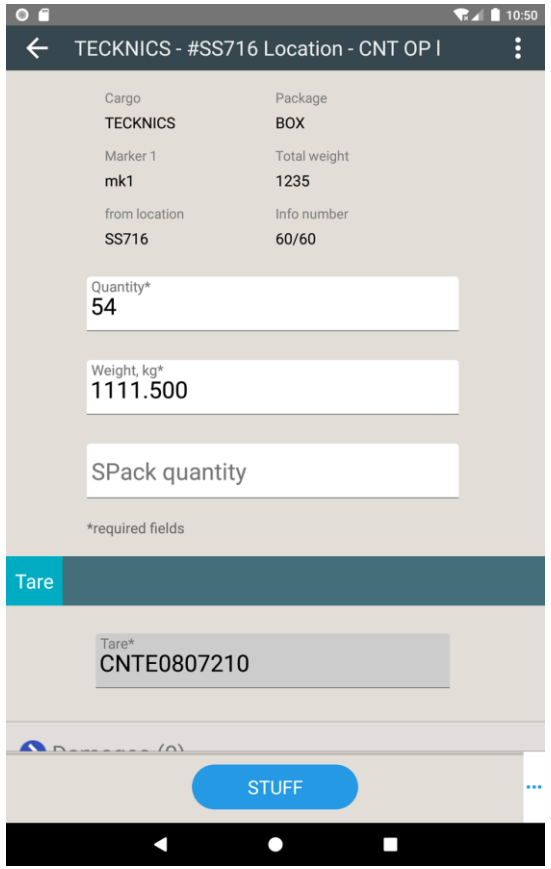
Upon completion, the tallyman will register new seals via RDT and confirm job completion. The system will automatically create a stuffing/unstuffing certificate.



Based on requests from clients the system can automatically create and distribute work orders for **partial unstuffing of containers**. Information about how much cargo needs to be unloaded from the container is entered in the comment field, the information is for reference.







The system allows to handle special loads, such as paper reels. Such cargo can be stored at the terminal as general cargo, but containers are used for transportation.

For one of our customers we set up a customized stuffing and stripping procedure with the use of barcodes. So after receiving the request, the system automatically selects the right container for the procedure.

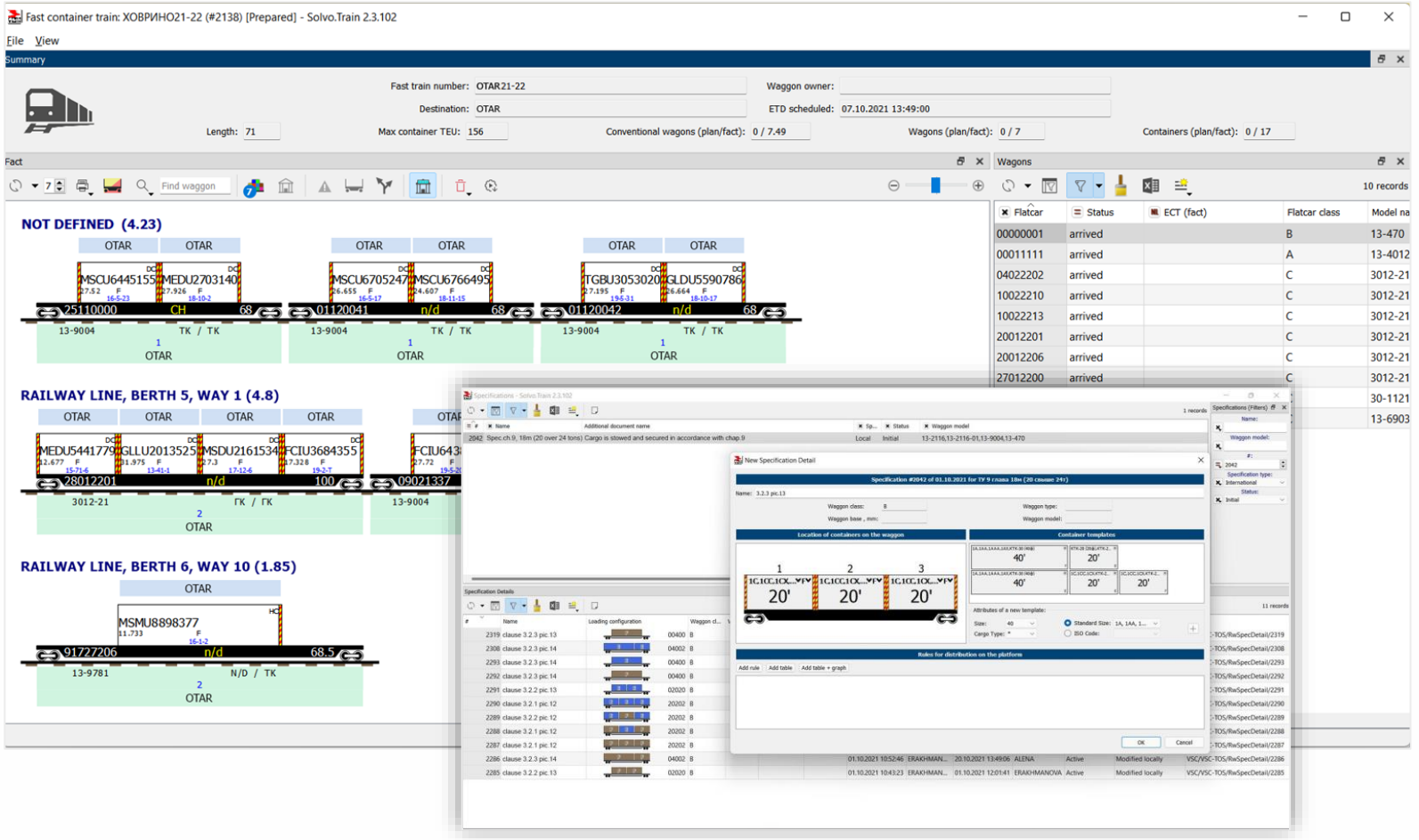
By using a barcode scanner, all information about the cargo packed in a certain container will be transmitted to the system and reflected in the history of container handling.

Improving cargo handling on the railroad

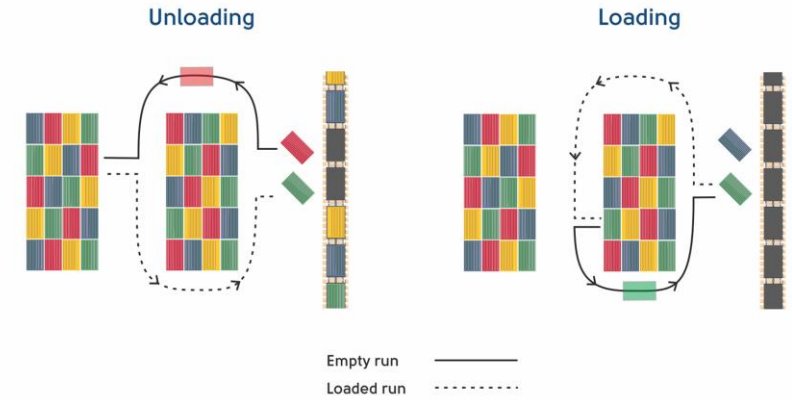
The system enables to automate:

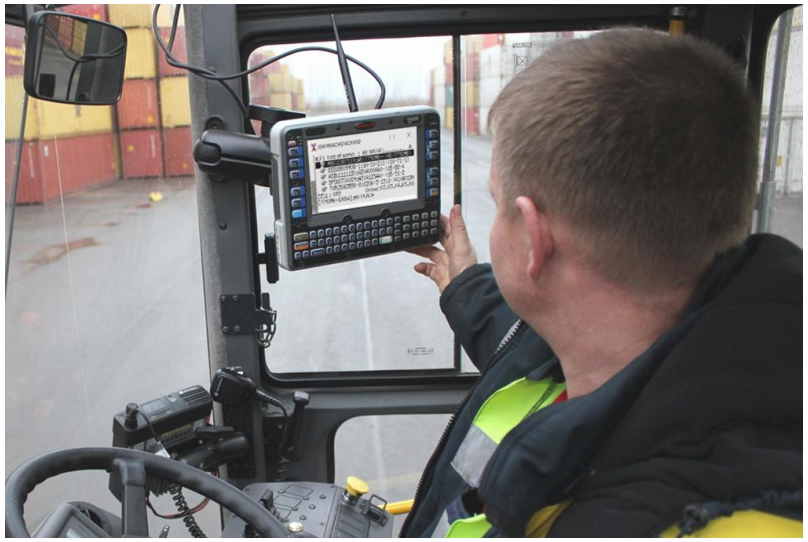
1. Planning of rail car staging.
2. Registration of rail consignment notes.
3. Registration of rail car arrival/departure.
4. Loading/discharging planning.
5. Train and cargo inspection.
6. Train loading and unloading.

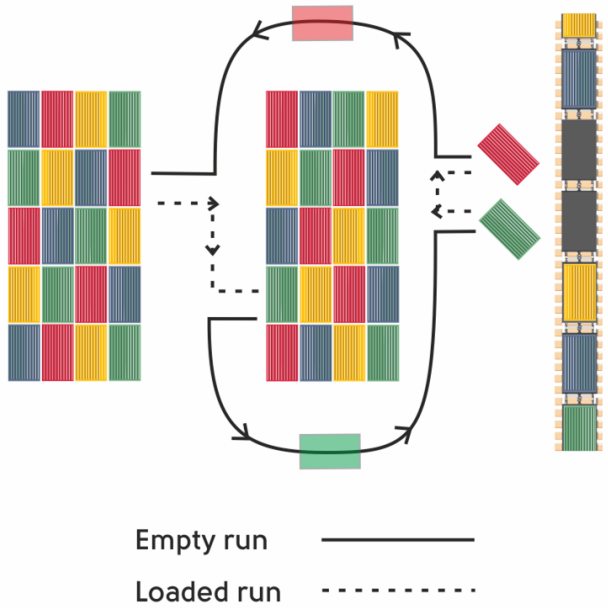
- Automatic planning of rail car staging increases personnel productivity.
- Reduced number of errors when creating rail car plan.



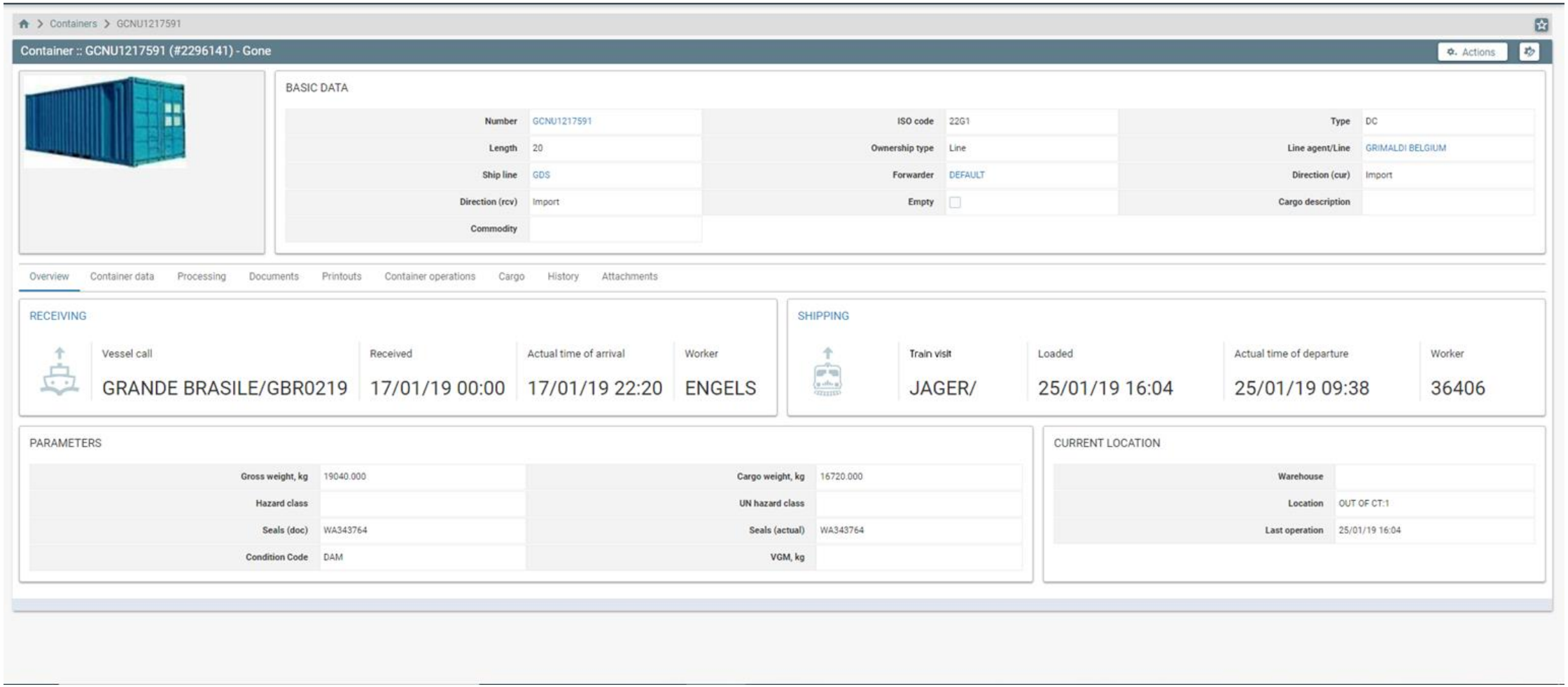
Dual cycling or optimization of pickup for loading/unloading







Tracking the History of Container Operations



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.

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.

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.

Thank you
for your attention!