VPORT TERMINAL OPERATING SYSTEM

VPORT

VTECH
VISION of TECHNOLOGY

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Today's fast-paced port industry requires multimodal terminals to operate at an exceptionally professional level to achieve higher productivity, optimise how assets are used, attract new customers and meet the expectations of all stakeholders. They need innovative, automated, and all-encompassing solutions to ensure that complex terminal logistics work at their best.

With the Vport Terminal Operating System (VPORT), terminal operators can plan, implement and control all day-to-day activities in real time.

VPORT is designed to automate all terminal operations from vessel information, berth planning, yard management, and cargo operations to commercial operations and customer relationship management. Using the latest IT solutions, VPORT increases overall terminal productivity and reduces operational and workforce costs.

Benefits of the Vport Terminal Operating System

- 360-degree real-time terminal
- management system
- Online operational data access
- Data recording and storage
- 3D terminal replication
- Enhanced control and monitoring
- of all terminal activity
- Early stage identification of bottlenecks
- Minimal maintenance and IT support

Key Features

- Vessel Calls Management
- Yard Operations Management
- Commercial Operations Management
- Automatic Role-based System Access
- Customer Relationship System
- VTS Integration

VESSEL CALLS MANAGEMENT

Vessels are key players in port commerce and require particularly accurate activities planning and control. VPORT incorporates a number of applications designed to optimise all vessel management processes, from vessel call planning to berth management and allocation of necessary resources. Thanks to VTS integration, terminal operators can use the information about vessel movement within a port. The infrastructure of the module also features a timely and fast notification system via e-mail or mobile text message.

VPORT optimises the following operations:

Vessel Calls Planning. This module controls every phase of vessel management operations, from the creation of vessel calls, arrival and departure notifications and monitoring, to allocation of the resources necessary for vessel entry into a port. The information is then transferred and registered in the terminal system.

Berth Management feature provides the terminal with a dynamic schedule of all vessels in one database. This tool helps to reduce both vessel waiting time and the costs associated with vessel movement between berth and yard.

Pilot and Tug Management application ensures optimal scheduling of pilot and tug orders on demand, monitoring of orders in progress, and controls the timely delivery of all requested services.

Terminal Services Management provides information about available resources, ensuring timely and accurate allocation and follow up of all requested resources and services.

Vessel Calls Management brings you:

- Enhanced berth productivity and minimal conflicts in berth schedules
- Easy and convenient monitoring of vessel activities in 3D
- More efficient vessel management
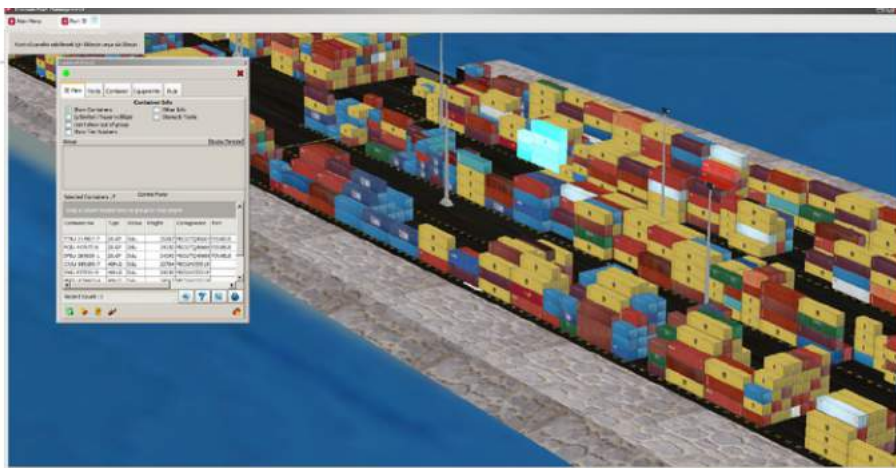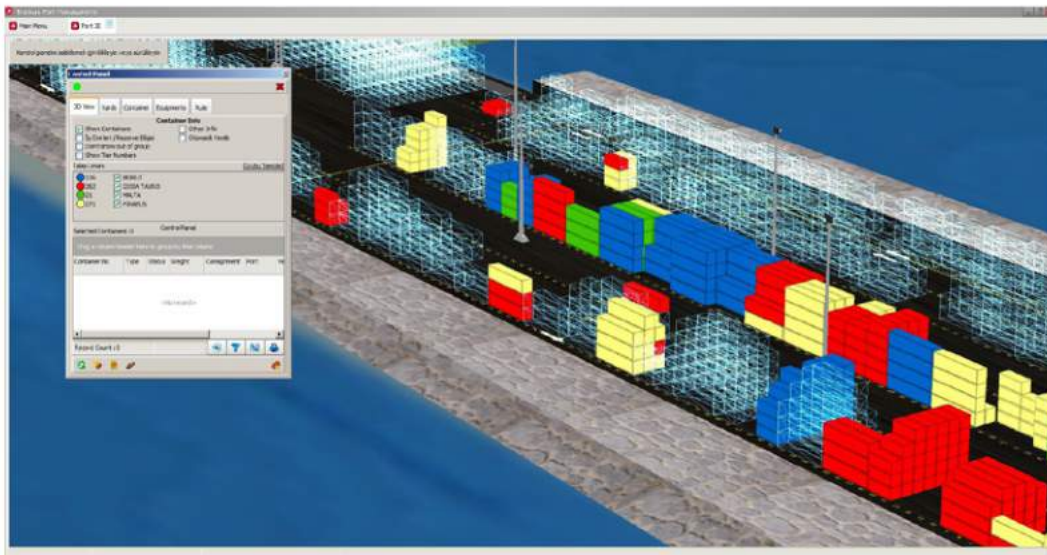- Reduced risk of mistakes in vessel operations.

YARD OPERATIONS MANAGEMENT

The efficient use of terminal space is important due to land scarcity and high operational costs. VPORT provides high-end solutions for monitoring and management of all terminal activities. With our tool, terminal operators can control all critical gate, yard, and warehousing processes in an exceptionally integrated, smooth, and safe mode. Indispensable to this system is 3D simulation, allowing a live interactive view of all operations within a terminal.

Yard Operations Management module performs a number of tasks, including:

- **Gate In-Gate Out Operations** is a convenient solution that makes it possible to define one or several gates to be allocated to a yard. As many ports have more than one entry and exit gates, our tool provides a tailor-made solution for each case. Terminal operators can design their own system in accordance with the facilities of the terminal area. Automatic data transfer and exchange allows operators to provide and receive information in a highly integrated manner.

- **Yard Management** application effectively coordinates and directs all cargo types (RO-RO, RO-LA, Liquid Cargo, Bulk Cargo, General Cargo, ROPA X, Container) entering and exiting the yard. With its 3D functionality, the real-time yard situation and job orders can be monitored and managed effiiently, allowing terminal managers to dynamically

- **Warehousing Management** module fulfils the most complex inventory management tasks, enabling terminal operators to optimise warehouse activities and significantly reduce costs. This efficient solution provides complete, real-time supervision of warehouse properties, monitoring and control of cargo movement from gates to warehouses, as well as between warehouses.

- **Cargo Operations Management.** Taking into consideration the enormous amounts of cargo being handled in port terminals every day, it's essential to optimise the cargo traffic processes. Cargo Operations Management application offers a streamlined solution for:

  ›› Multi-purpose terminals (RO-RO, RO-LA, Liquid cargo, Bulk Cargo, General Cargo, ROPA X, Container)

  ›› Electronic Data Exchange (EDI)

  ›› Coordination of cargo loading/unloading

  ›› Cargo traffic planning

  ›› Monitoring of cargo movement

  ›› Workforce management

  ›› Cargo manifest input/edit

  ›› Identification and indication of dangerous cargo and OOG (Out-of-gauge)with specific colour

  ›› Cargo clearance and tax/duties calculation.

- **Equipment Management** module enables interated planning, employment and coordination of manual, semi-automated and automated equipment within a terminal. 3D visual displays simulate all equipment (MHC, SSG, RTG, STACKER, Terminal Tractor, etc.)identified in the system via the apparatus placed over WLAN/3G/4G via the aid of GPS support. The tool also supports a 'job order' system, providing specific workforce information to the Human Resource (HR) department for further performance evaluation.

• **Mobile application** has been designed for terminal operators and port managers to supervise and execute all activities from the location where the activity is carried out with just a few taps of the finger. The software is intuitive and requires minimal training time. Using a handheld terminal, the operator can effectively monitor all processes, such as important terminal announcements, cargo status information, vessel schedules, equipment distribution (stacking equipment application), and to use their own initiative when following job orders. The system also provides real-time information to the HR department for individual performance evaluation. Benefits include:

• Real-time information flow from gates to invoicing

• System adaptation according to the specific needs and qualifications of the operator

• Automatic operations or manual operations using operator initiative.

• **Weighbridge** is a reliable tool to optimise cargo handling operations and custom control processes. Whether a single unit or multiple weighbridges, the module provides the ideal centralised controlling solution. It is designed to accurately manage and weigh received cargo and outgoing cargo. Not only is the Weighbridge module capable of managing data collection and allocating it into automatic accrual system, but it can also perform essential cost reductions, minimising the number of weighbridge operators engaged and minimising on-site bottlenecks. Among the advantages are:

• Management of all weighbridges from one central location

• Options for manual and automatic planning

• Integration with general cargo, container, tanker and vehicle operations.

• **Yard Operations Management benefits:**

• Enhanced control over cargo movement

• Automatic integration available across all systems

• involved in the process

• Dynamic yard definition

• Efficient arrangement of traffic flow in the yard

• Customs rules and regulations data provided

• Reduced operational costs

• Interactive 3D monitoring of all equipment

• Real-time flow of information from gates

• to invoicing

• Centralised weighbridge management

• Automatic accrual system eliminates likely

• service shortages.

COMMERCIAL OPERATIONS MANAGEMENT

- **Billing and Tariff System** helps terminal managers to automate tariff calculations and billing processes, saving time and reducing the risk of error. This tool enables managers to create bespoke offers consistent with the customer relationship, counting special discounts in an automated way. What makes this module indispensable is the ability to calculate relevant port taxes, value added tax and other charges associated with specific government regulations. Among the special features are:

  ›› Constituting billing criteria
  ›› Automatic pro-forma invoice
  ›› Billing through automatic accounting
      accrual system
  ›› Advanced payment system.

- **Contract Management** is a comprehensive system that deals effectively with the creation and follow up of contracts, making it easy to manage contractual greements in the most flexible manner. Highlights of the tool are the contract documentation status tracking, and 'go'/ 'no go'/ 'transaction blocking' options (offer leads to contract only with authorisation from all predetermined users).

- **The professional management of subcontractors** allows port terminals to focus on their core activities, maintain cost effective operations, and plan resources efficiently. The Subcontractors Management module manages every aspect of a port-subcontractor relationship, such as pilotage and tugboat services, stevedoring, and leasing, in a mutually beneficial way. Advantages comprise:

  ›› Decreased investment in assets,
  such as machinery and equipment
  ›› Reduced fixed costs by converting them
  into variable costs
  ›› Increased productivity and profitability

ROLE-BASED SYSTEM ACCESS

Our Integrated terminal information system makes the flow and exchange of information highly convenient and customised, providing pilots, terminal operators and ship agents with real time operational data. Thanks to its role-based system access, all users get appropriate access rights and can perform various functions based on their roles. This approach ensures they have access to the data they need to do their jobs efficiently.

CUSTO MER RELATIONSHIP SYSTEM

Customer Relationship is a cost saving solution for interdepartmental communication and communication with customers. The system is designed to be a 'customer- friendly' module allowing customers to follow up the status of their job orders in real time. Operated via internet and intranet, the module enables the customers to choose relevant services and create their own job order list. For more convenient payment, we offer Kiosk and PC systems, where customers can perform transactions via special kiosks or their own PCs at any time. Benefits include:
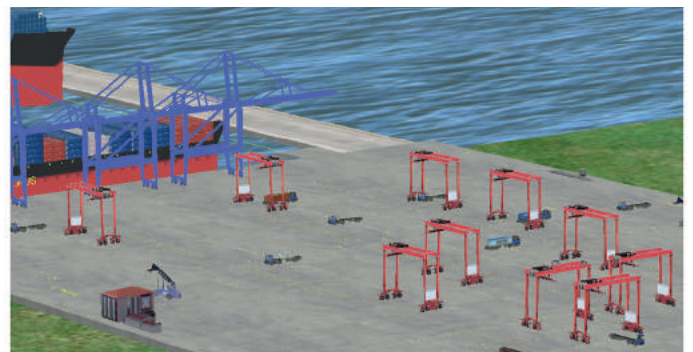
- Cost saving communication system
- Reduced human error due to electronic transfer
- of job requirements into the system
- Automatic integration with EDI
- and Excel file formats
- Real-time monitoring of job orders and easy job
- order modification module
- 24/7 online customer service.

VPORT includes an arrangement that automatically triggers the billing service after the service has started.
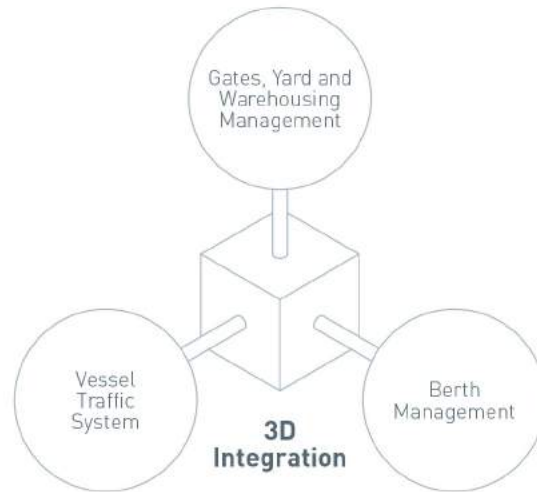

VPORT works with many integrated modules with its own system.

VPORT USING 3D TECHNOLOGY

Port terminals are complex entities, performing many operations that require cohesive monitoring and management. Thanks to its 3D functionality, VPORT enables terminal operators to improve control over vessel traffic, berth allocation, gates, yard, and warehousing, as well as generating more efficient reporting using 3D interactive simulation screens.
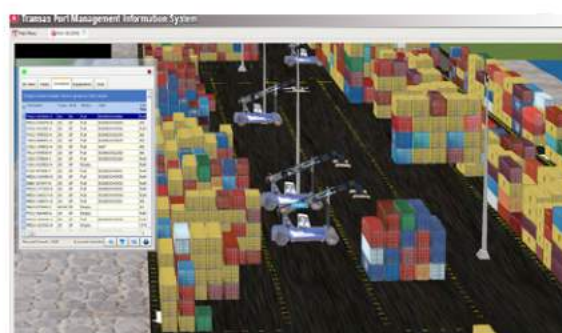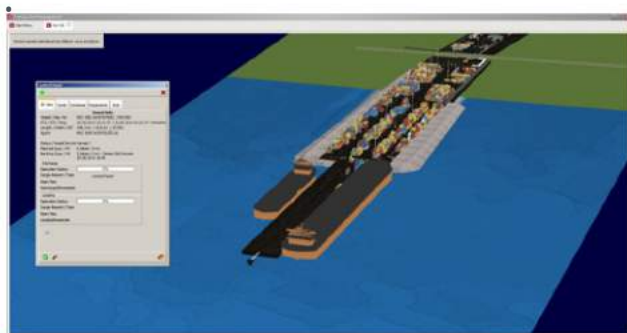

Berth Planning

- Vessel calls can be allocated in 3D modelling
- Dynamic 3D dock planning (existing vessels as well as vessels due to arrive)
- 3D ship operation monitoring screens
- 3D visual planning display on simulation screens
- (advance simulation of scenarios and solutions
- to maximise berth productivity)

Gates, Yard, and Warehousing

- 3D visualisation of a terminal, including yard, buildings, warehouses, quay cranes, and cargo
- 3D Container visualization (On Yard)
- Intuitive 3D display of job orders
- Manual modifications on the screen are instantly displayed in 3D
- 3D visual displays of all equipment (MHC, SSG, RTG, STACKER, Terminal Tractor etc.) identified in the system with the apparatus placed over WLAN/3G/4G using GPS support

Benefits:

- Realistic representation of a port environment creates more efficient solutions
- Improved supervision of all port operations
- Instant recognition and better understanding of constraints at early stages
- Data interpretation is enhanced
- Greater port control and stability
- Increased employee and stakeholder satisfaction
- Cost efficient solution.