

# PORTit TOS



## Flexible Terminal Operating System

Designed for small and medium sized container, ro-ro and general cargo terminals with multiple options and configurations to support the business requirements

Supports terminal operators in their day to day operations and in their communication with relevant stakeholders

Helps terminal operators improve efficiency in workflow, reduce carbon footprint, human errors and minimizes administration

# Feature options

## Container management

The container module of PORTit TOS manages, controls and tracks activities and information at container terminals in connection with transports by truck, vessel and rail.

Booking management for creating and updating bookings, integration to Gate Operating Systems (GOS) and depot management are examples of key features.

## Roll-On/Roll-off (RoRo) management

The RoRo module of PORTit TOS manages, controls and tracks activities and information at trailer terminals in connection with transports by truck, vessel and rail.

Specific RoRo related information such as TIN numbers is handled together with RoRo related activities such as Mafi trailer lift on/off.

## Bulk and Breakbulk

The Bulk and Breakbulk module of PORTit TOS manages, controls and tracks activities and information relating to all types of bulk goods at terminals in connection with transports by truck, vessel and rail.

Features include support for managing unit IDs e.g. individual paper rolls and sawn timber packages.

## Warehouse Third Party Logistics (3PL)

PORTit Warehouse 3PL solution handles all aspects of warehouse operations ensuring high productivity of warehouse operations as well as accuracy of processed data.

## Container Freight Station (CFS) support

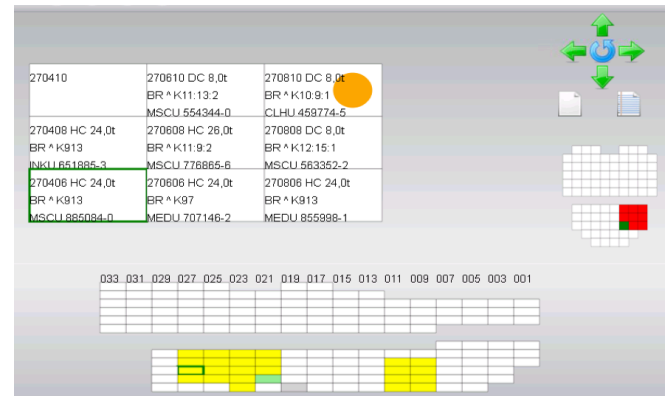
PORTit TOS bookings support CFS via information about strip and stuff operations for containers.

## Remote Data Terminal (RDT)

Container Handling Equipment (CHE) operators, Tallymen and other terminal workers can receive workorders and register field data via dedicated apps for mobile devices.

The [CHE mobile app](#) shows the CHE operators the work to be done and allows them to easily report back after completion.

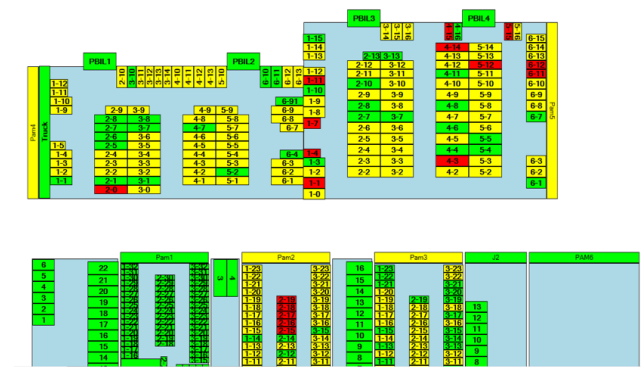
The [Tally mobile app](#) presents a graphical overview of the received plan.



The [Terminal worker app](#) presents assigned workorders, e.g. a container cleaning task.

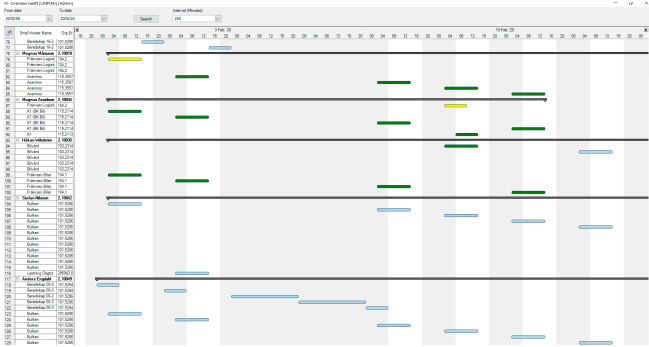
## Yard planning

The yard stowage position is calculated for each container entering the terminal, based on the information in the booking and the pre-defined stacking rules and strategies (e.g. based on weight). Planning of yard and is visualized in a graphical user interface for improved overview and understanding.



## Resource planning

Terminal staff and equipment can be scheduled and allocated to activities/projects with visualisation of schedules and allocation levels. Staff cost, labour rules etc., is managed and schedules can be exported to HR systems for salary payments. A time reporting mobile app is available for terminal workers to report their actual working hours.



## Inspection app

The inspection app enables container and trailer inspection staff to enter inspection results via a mobile device.

Damage reports can be made in the app including drawing the location of damage in a picture, attaching photos and documents, etc.

## Agreements

Prices and tariffs can be defined for all terminal operations and space rent. A standard price list as well as individual customer agreements can be defined.

## Invoicing

All terminal operations and space rental is charged to customers based on relevant agreements. Invoices can be sent via printed paper, email, or via integrations to electronic invoicing.

## Port call management

The port call module supports administration of vessel calls to a port terminal.

PORTit TOS is seamlessly integrated with the sister system suite PORTit Port Operation System (POS) adding the features of berth planning, AIS etc.

## Gate Management

The Gate management module supports terminal security including ISPS requirements for port terminals. Features include visitor access management (applications, approvals etc) as well as integration to card manufacturing services and Gate Operation Systems (GOS).

## Rail management

With the Rail management module planning of train set loading based on carriage order, maximum carriage weight, destination etc can be done. For fixed routes timetables and carriage sets/order can be defined.

## Customer portals

PORTit TOS enables online access to relevant information for logistics partners and stakeholders for status on containers and goods in the terminal as well as the ability to generate bookings online.

## Preadvice

With the Preadvice functionality hauliers and drivers can preadvise drop-offs and pick-ups and thereby simplify and reduce time at gate as well as overall turnaround times at the terminal. Hauliers and drivers are given real time goods status updates making quick and just-in-time visits to the terminal resulting in reduced congestion and carbon footprint at the gate. A gate kiosk application is included in the Preadvice solution that allows drivers to open the gate with a pass key received from Preadvice.

## Reports and KPIs

45+ standard queries and reports are available in PORTit and others can be configured by users in the system to meet individual needs. Integrations to 3<sup>rd</sup> party tools such as e.g. Qlik and Power BI are also available.

## MSB RIB integration

When handling dangerous goods an integration to the Swedish Contingency Agency's (MSB) database for dangerous goods information is available. Integrations to other national or international services can be implemented on request.

## Enterprise Asset Management (EAM)

The EAM feature helps track and report on the most critical terminal assets and ensure the right maintenance is performed at the right time optimising and extending their lifecycle, reducing cost and risk. The system supports external actor access and reporting of activities and incidents.

## Electronic Data Interchange (EDI)

PORTit TOS is designed to facilitate EDI communication between all parties involved in goods transport and services. All types of regular logistics messages are supported via EDIFACT/ ODET/Excel/XML/PDF/Html etc. This is realised via a flexible and configurable EDI engine.

## Integrations


PORTit TOS can be integrated with third party solutions such as ERP, GOS (utilising e.g. OCR and RFID), HRMS, etc. Integrations to many such 3<sup>rd</sup> party systems have been developed over the years and Stamford is open to integrating to any 3<sup>rd</sup> party system regardless of competition.

# Technology & Architecture

## Architecture

PORTit TOS is part of the PORTit suite and is modularised to be able to be adapted to the size and business of every customer. All modules integrate seamlessly to each other and can therefore be combined effectively in your business. More and more modules are being transferred to the mobile platform and thus improving the accessibility to all users and stakeholder together with a natural modernisation of user interfaces.

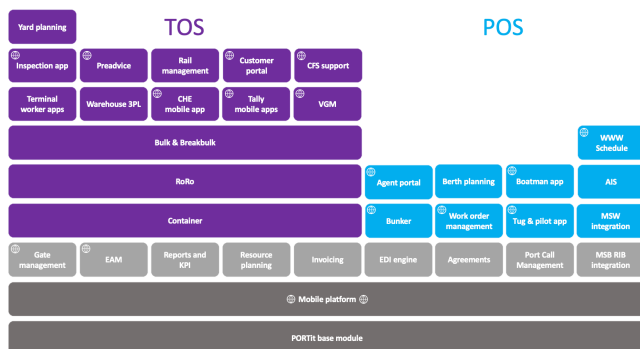
## Hardware

All web enabled modules (indicated with  in the system module overview) are accessible via any web enabled device. Remaining modules are available as client installations that can be made accessible for any web enabled device via Terminal Server, Citrix Server etc.

PORTit requires Windows Server 2012 or greater. Memory and processors depending on number and type of PORTit modules run.

## Software

PORTit requires Progress OpenEdge and SQL Server and is built on Progress OpenEdge, .net, HTML5, Angular JS, jQuery and Sencha.



PORTit system module overview

# PORTit TOS reference installations

Port of Helsingborg  
Port of Norrköping  
Port of Halland - Halmstad  
Port of Halland - Varberg  
Port of Karlshamn

Port of Åhus  
Port of Uddevalla  
Port of Sölvesborg  
Mälarhamnar ports  
Shorelink

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## Stamford and Addnode Group

### **Stamford AB**

Stamford is the Nordic regions leading provider of logistics solutions for ports with over 25 years of implementing and integrating advanced logistics solutions to its customers. The company's proprietary software suite PORTit is used by over 90 percent of the Swedish port companies and has in recent years expanded its business to Denmark, Norway and Iceland.

We have around 70 employees based in our offices in Stockholm, Karlstad, Gothenburg, Malmö (Sweden) and in Pune (India).

### **Addnode Group**

Addnode Group acquires, operates and develops cutting edge enterprises that digitalise society. Addnode Group's shares are listed on Nasdaq Stockholm. For more information visit: [www.addnodegroup.com](http://www.addnodegroup.com)

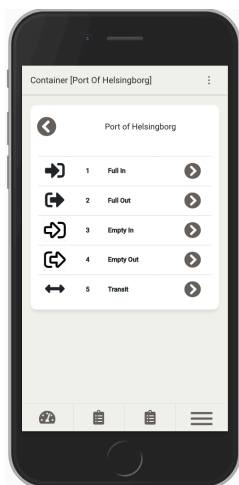
# Appendix - Product roadmap glimpse

## Strategy

The general product roadmap strategy is to incrementally complement PORTit with new web-based modules as well as rebuilding existing modules and moving functionality to the web platform. All development is done in the same way the success of PORTit was built – together with our customers. The roadmap strategy improves mobile access, user experience and an incremental modernisation thus future proofing PORTit TOS.

## Preadvice 2.0 & 3.0

A new Preadvice module will be released in Q4 2020. The new module will support all goods types and full dangerous goods management (including uploading of documents). The module is designed for mobility and has an improved interface for truck drivers and hauliers. An updated gate kiosk will allow drivers to specify the transport occasion in more detail, e.g. what container is placed front and rear on the truck. The new Preadvice solution can be integrated to any TOS enabling hauliers to work in one system for many customers.



In a further upgrade of Preadvice in Q2 2021, time slot booking for trucks will be added to further smoothen the workload at the terminal, reduce turnaround times and emissions related to traffic around the terminal.

## Tally 2.0

An updated version with improved graphical layout views with extended view options and additional KPIs. The new module is expected to be launched 2021.

## Rail management 2.0

A new graphical Rail management module will be developed to increase overview and understanding and speed up planning via drag and drop. The new module is expected to be launched 2022.

## Customer portal 2.0

In an improved Customer portal, targeted for 2021, a modernised user interface and the possibility to search for information in all PORTit installations that have granted access to users.

## Reports, KPIs and BI

A number of new standard reports will be developed continuously. An improved data structure and interface will be implemented in Q4 2020 allowing more complex and faster external BI analysis, e.g. Qlik and Power BI.

## Automation

Integrations to Automated Rubber -Tyred Gantry (ARTG) and other similar systems are expected to be developed in the near future together with PORTit customers looking to invest in ARTG for further efficiency improvement in their operations. PORTit can be interfaced with any 3<sup>rd</sup> party system selected by a PORTit customer.

## Optimisation of operations

Through our access to the Quintiq optimisation technology from Dassault Systèmes we will be able to build support for optimising resource plans, A-RTG plans, berth plans.

## Supply chain optimisation

Through our collaboration with Awake.AI, PORTit TOS can be connected to the Awake platform for sharing of logistics information with other stakeholder for overall optimisation of the supply chain.