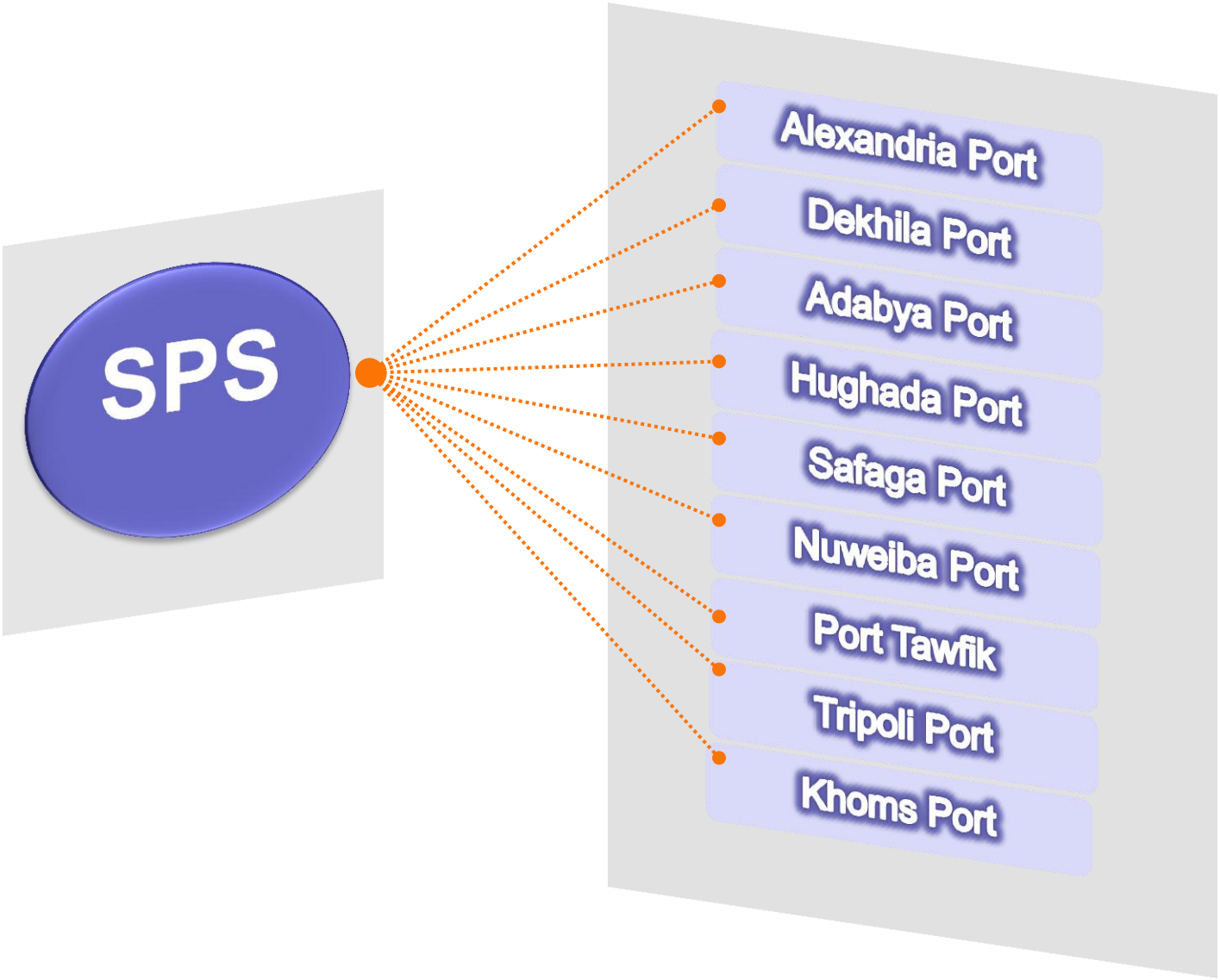
Smart Port Solution

ISFP
Integrated Solutions for Ports

Smart Port Automation Clients



ISFP
Integrated Solutions for Ports

SPS Role

"Supports management in achieving ports Operational Objectives by utilizing its resources in an efficient and effective way through
Planning future operations,
Executing, Monitoring and Controlling current operations"

SPS Modules


Port KPIs
Port Simulator
Vessel Management System
Cargo Handling System
Gates Control System
Licensing Management System
Warehousing Management System
Terminal Operating System
Billing System
Port Mobile Applications
SPS

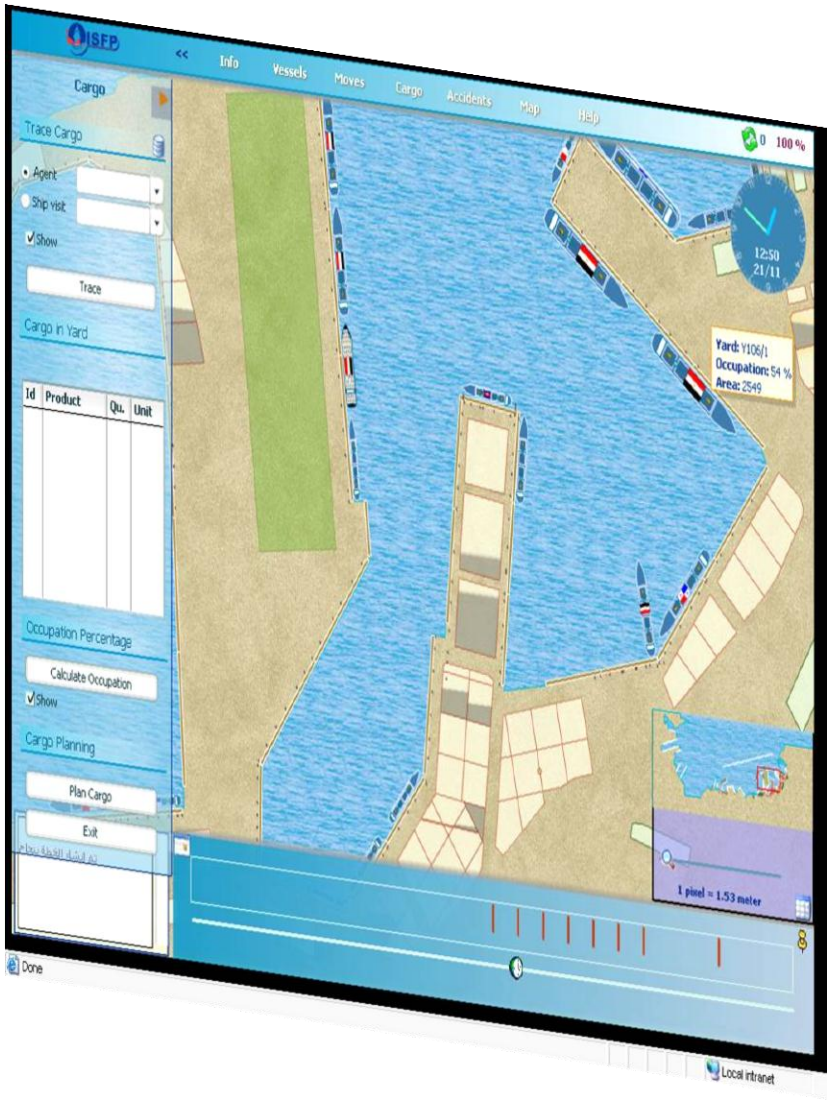
❑ Port Simulator

❑ Functionality

- ✓ visual presentation of Port
- ✓ Berths & yards allocation
- ✓ Time navigation line

❑ Value

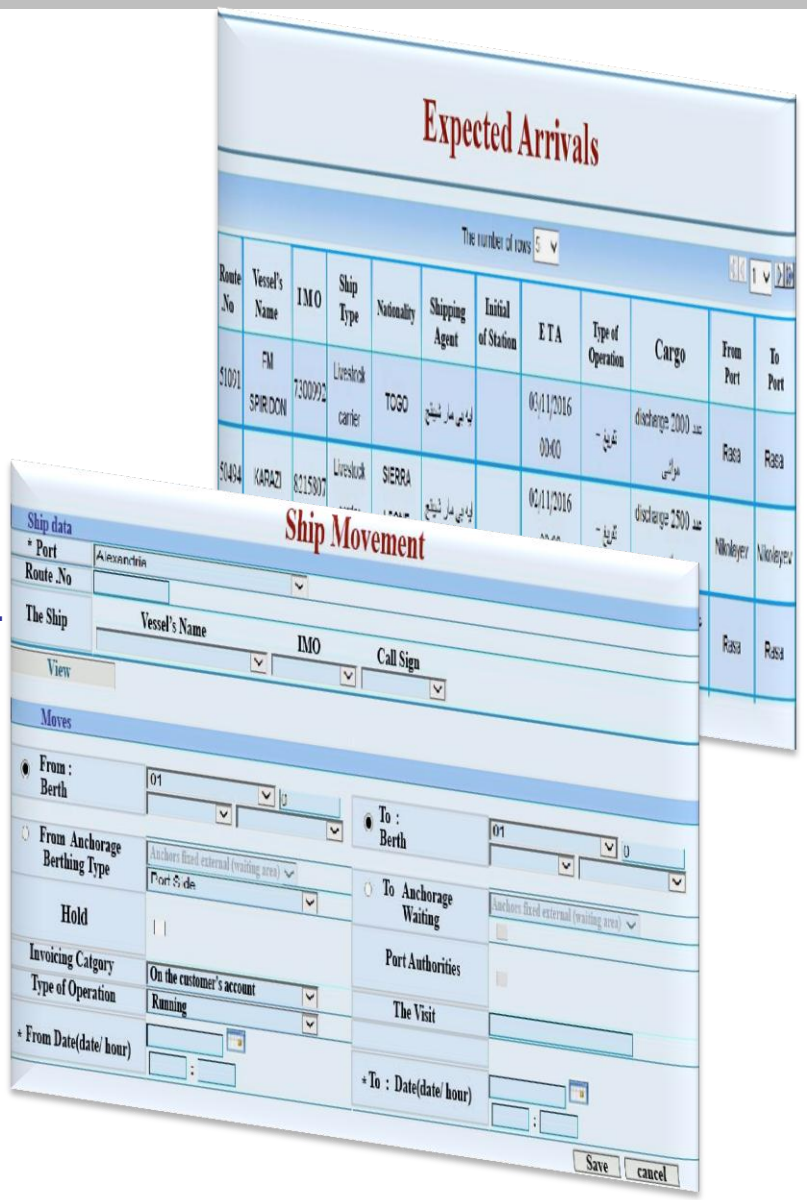
- ✓ Monitor berths and yards current allocation visually.
- ✓ The ability to visually show berths and yards status at previous time
- ✓ The ability to visually show berths and yards status at future time based on planning data
- ✓ Assists in Berths and yards Planning



❑ Vessel Management System

❑ Functionality

- ✓ Berth planning
- ✓ Marine services planning
- ✓ Vessel moves
- ✓ Marine accidents and pollution
- ✓ Vessel departure.
- ✓ Integrates with other port community systems.
- ✓ Supports RDT



❑ Value

- ✓ Ease, speed and accuracy in issuing vessel related invoices
- ✓ Ease, speed and accuracy in extracting vessel related statistics

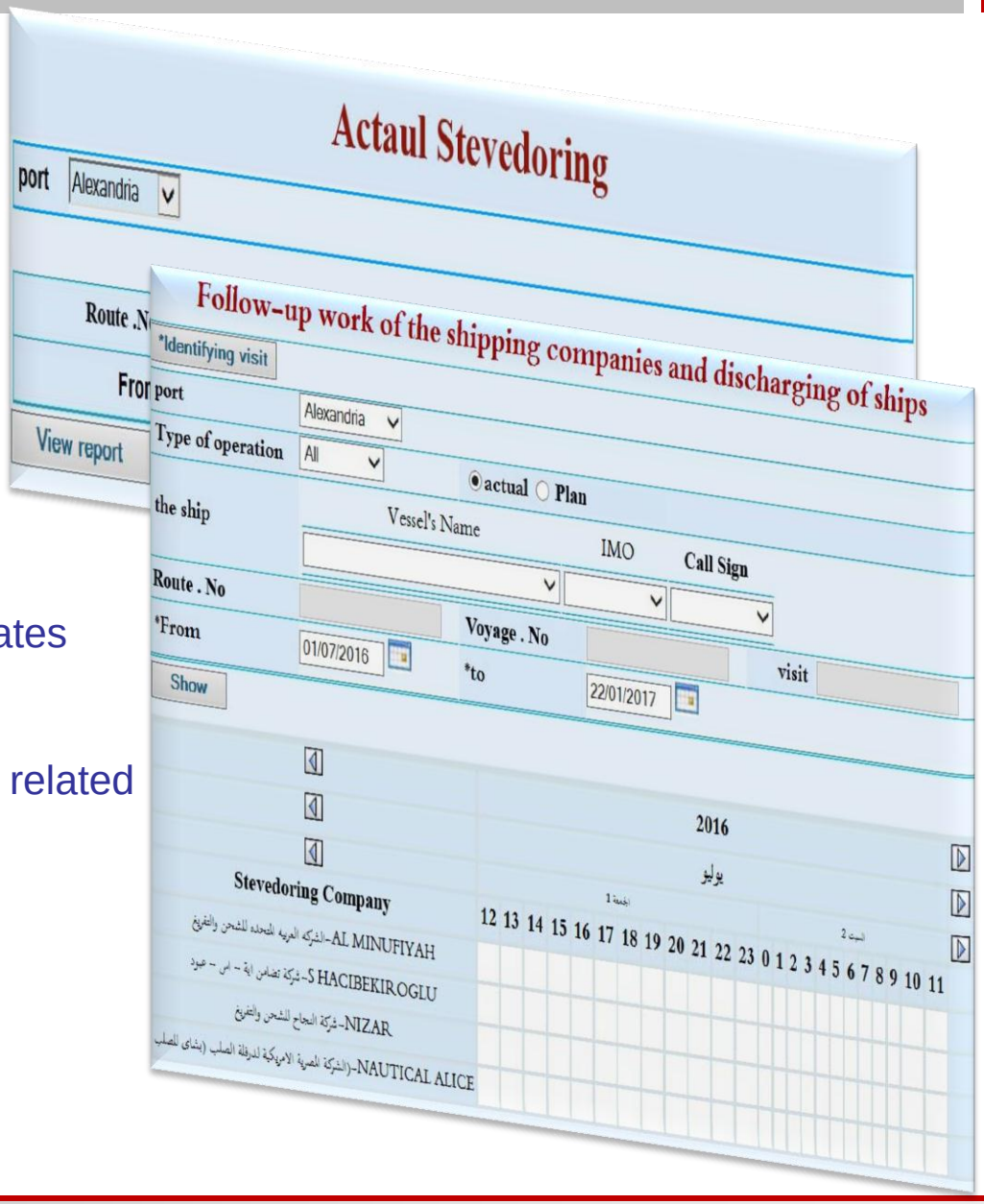
❑ Cargo Handling System

❑ Functionality

- ✓ Deals with all cargo documents
- ✓ Monitor stevedoring operations
- ✓ Calculates actual stevedoring rates
- ✓ Analyze the reasons for any deviation

❑ Value

- ✓ Instant monitoring of actual stevedoring rates
- ✓ Availability of Stevedoring Statistics
- ✓ Ease, speed and accuracy in issuing related invoices

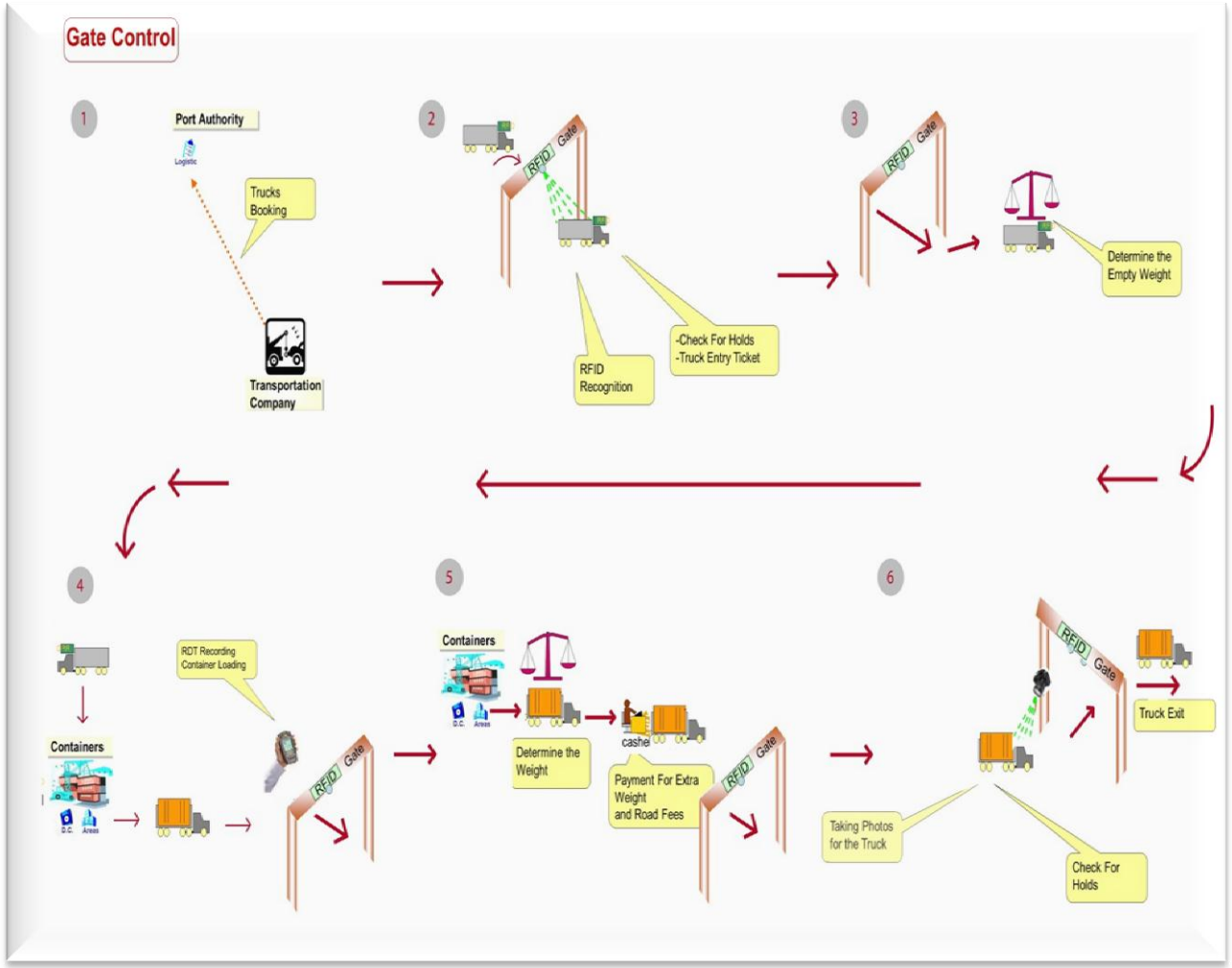


❑ Gates Control System

❑ Functionality

Handles **Truck Visit** inside the port through

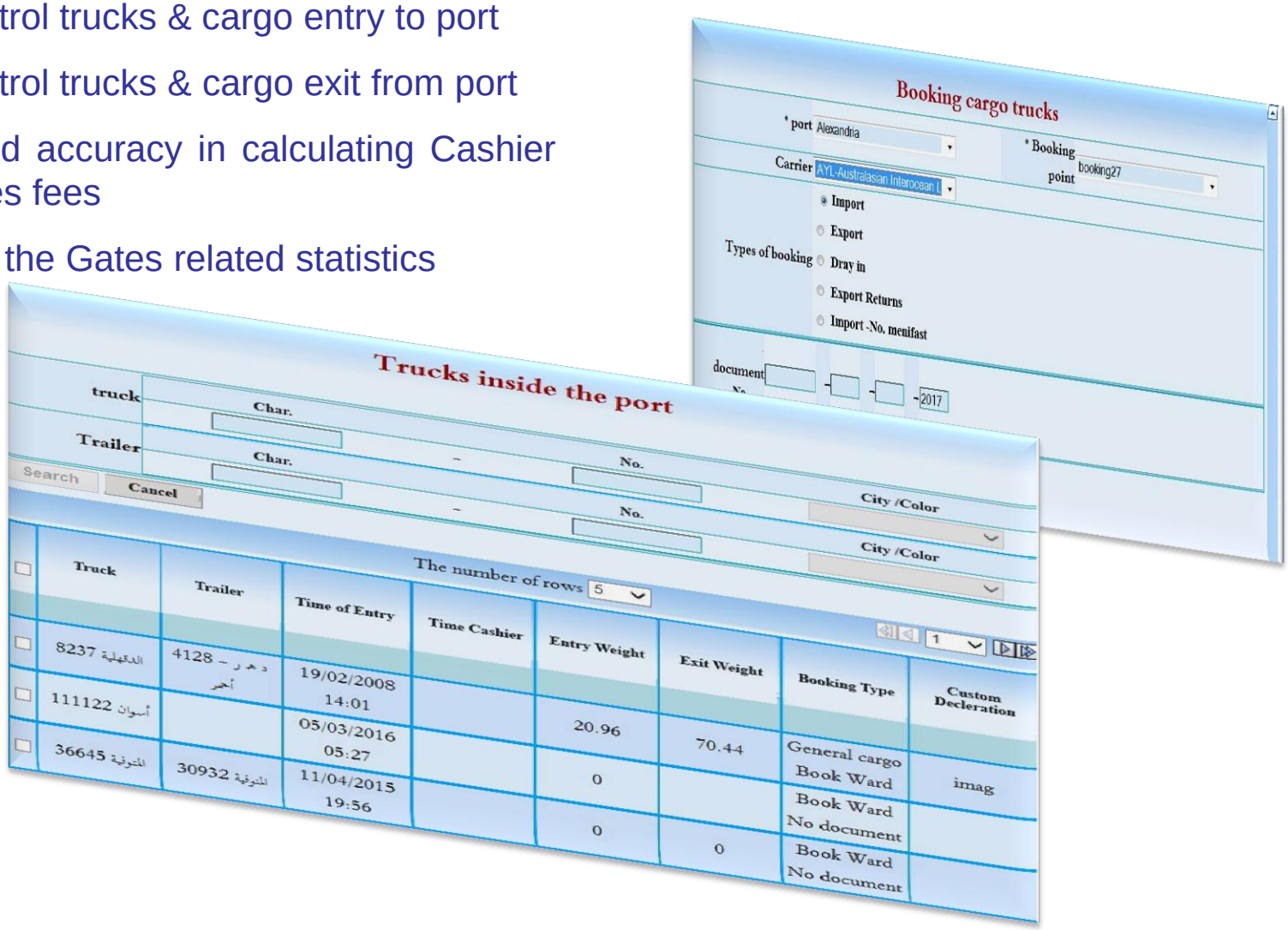
- ✓ Booking module
- ✓ Entry module
- ✓ Weighbridge module
- ✓ Load / Discharge module
- ✓ Cashier module
- ✓ Gate holds module
- ✓ Exit module



❑ Gates Control System

❑ Value

- ✓ Monitor and control trucks & cargo entry to port
- ✓ Monitor and control trucks & cargo exit from port
- ✓ Ease, speed and accuracy in calculating Cashier and weighbridges fees
- ✓ Ability to extract the Gates related statistics



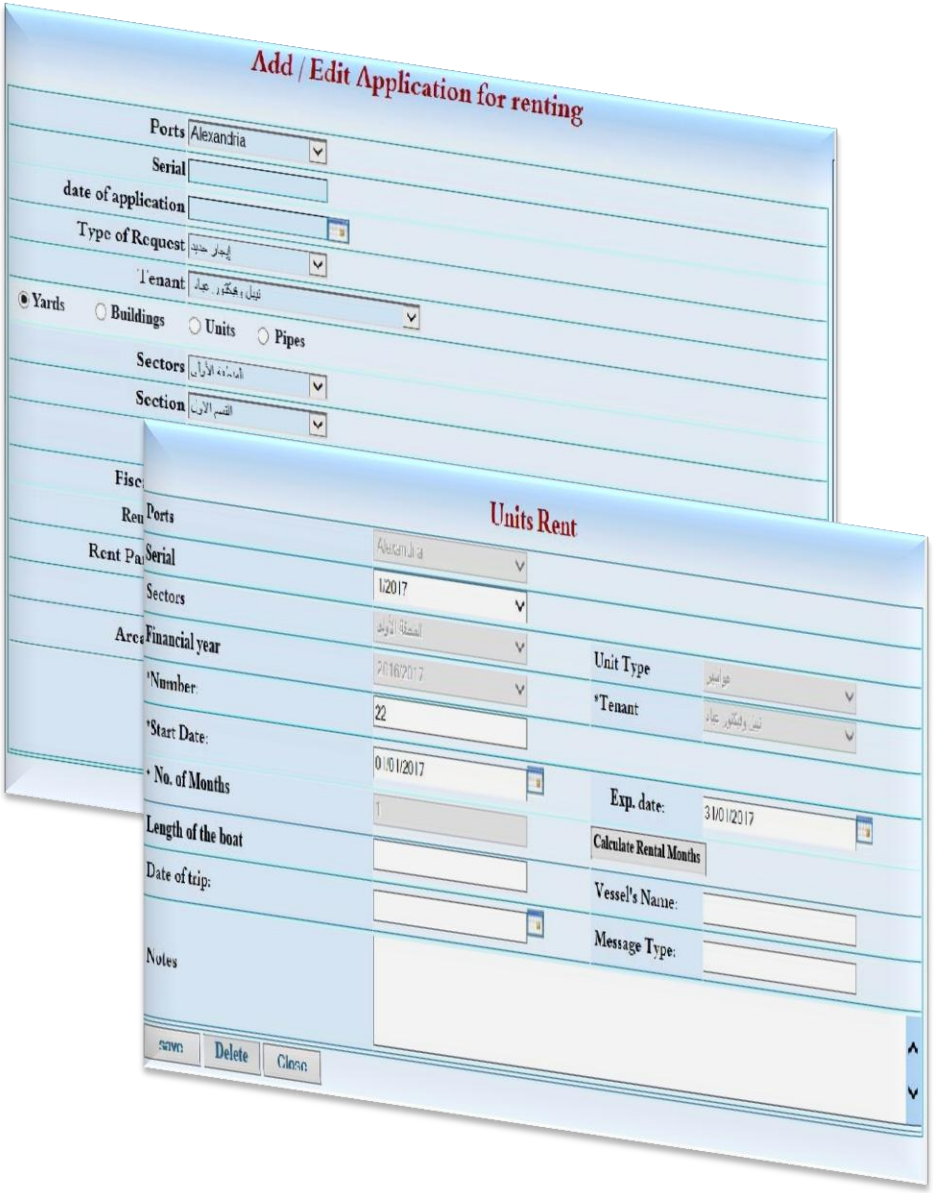
❑ Licensing Management System

❑ Functionality

- ✓ Handles the process of authorizing companies to work in certain activity inside the port
- ✓ Handles the process bidding for renting ports assets
- ✓ Handles delivery and violation reports
- ✓ Handles trucks periodical port entry subscription

❑ Value

- ✓ Monitors and record rental violations
- ✓ Ease, speed and accuracy in issuing related invoices
- ✓ Better service to parties dealing with port
- ✓ Better utilization of ports resources



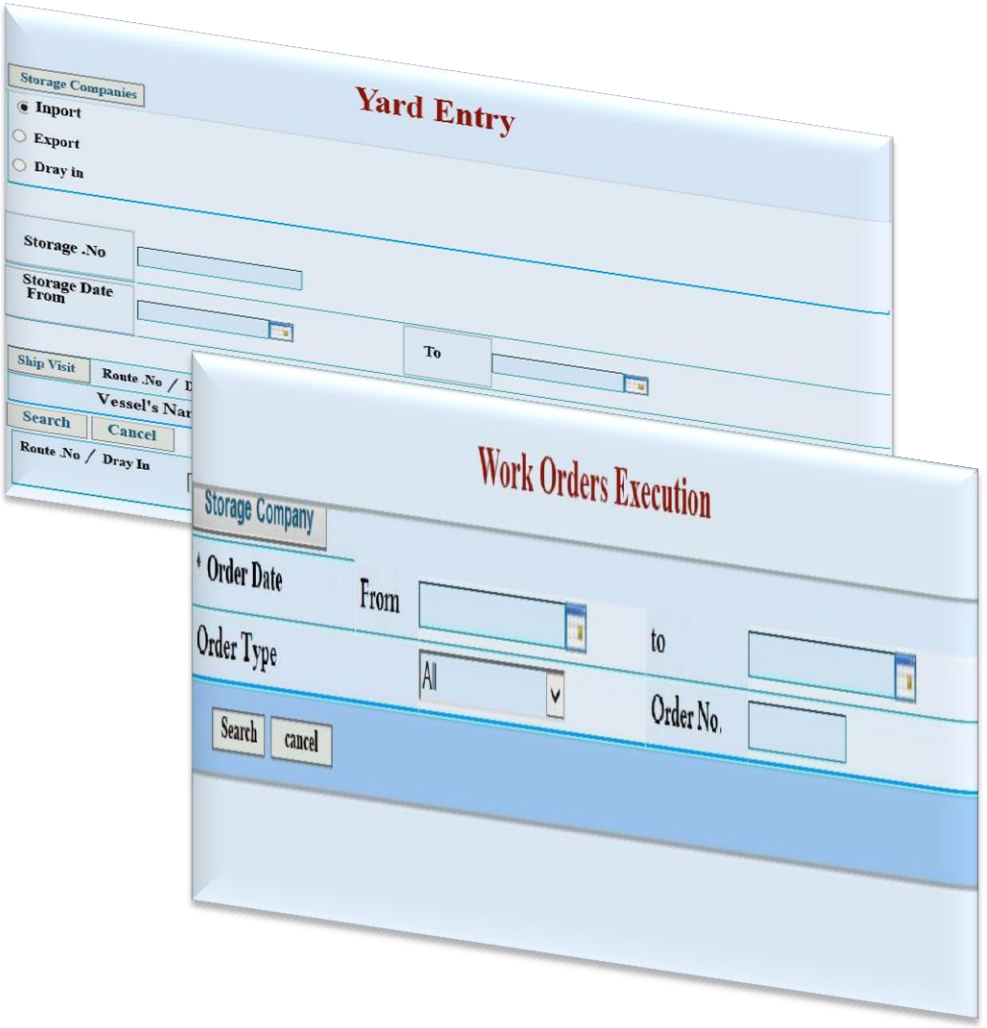
❑ Warehousing Management System

❑ Functionality

- ✓ Plans cargo storage and movement and generates relevant work orders
- ✓ Handles work orders execution supported with RDT
- ✓ Records storage services for goods
- ✓ Handles damaged/lost cargo reports
- ✓ Handles neglected cargo process

❑ Value

- ✓ Monitor stored quantities for best utilization
- ✓ Ease, speed and accuracy in issuing related invoices
- ✓ Statistical cargo reports for decision support



❑ Terminal Operating System

❑ Functionality

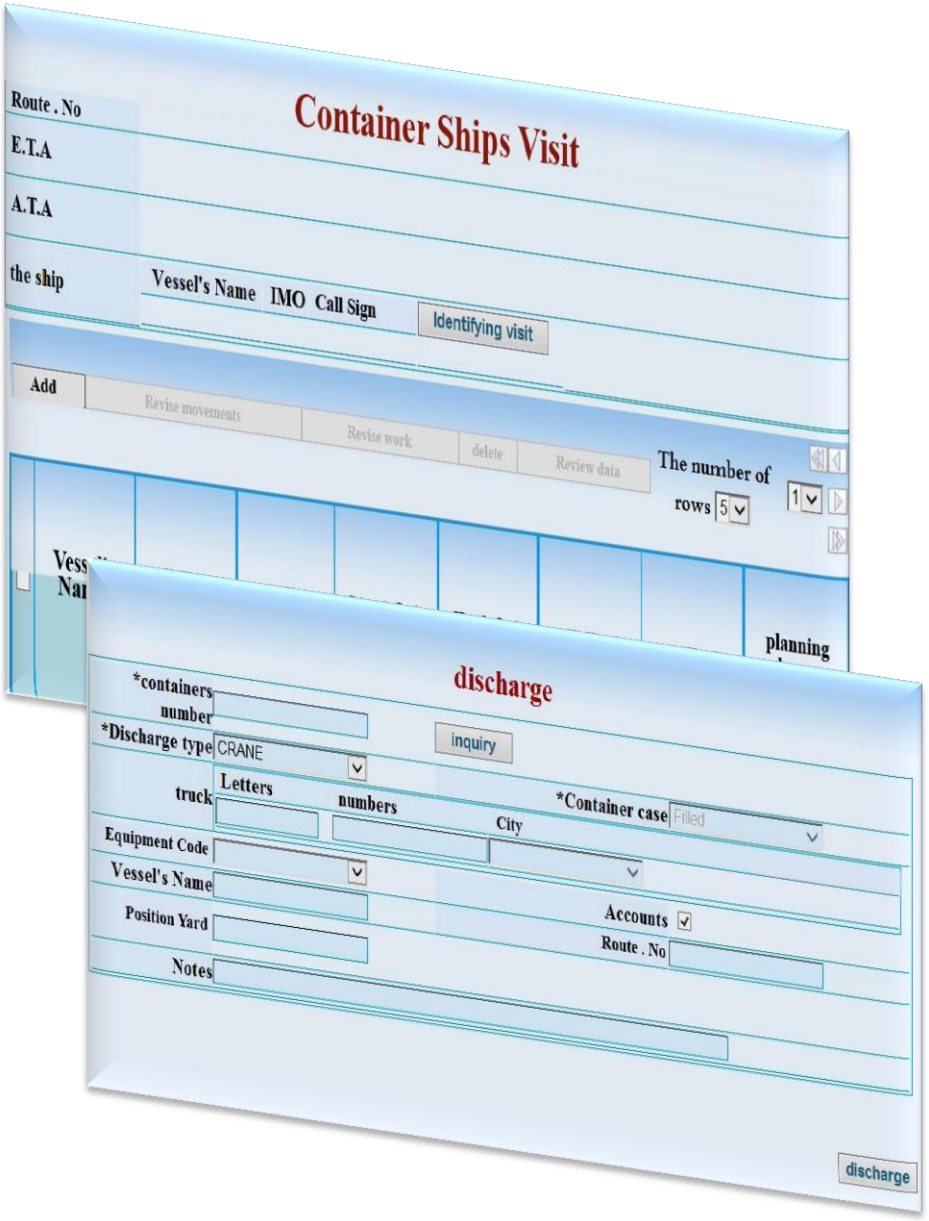
Enables Container Terminal to manage their operational work

- ✓ Handles ship visits data
- ✓ Handles load/ discharge operations (ship/truck) with RDT support
- ✓ Handles lash operations, container shifts and vessel moves with RDT support
- ✓ BAPLIE message support
- ✓ Handles container load list and empty list
- ✓ Handles FCL, LCL empty containers
- ✓ Handles hazard and reefer containers
- ✓ Provides yard management capability with RDT support
  - Storage services for containers/goods
  - Damaged/lost container reports
  - neglected containers process
  - Stiffing and staffing processes
- ✓ Manages terminal Gates control
- ✓ Integrates with automatic truck/container identification solutions (OCR, RFID, etc.,..)

❑ Terminal Operating System

❑ Value

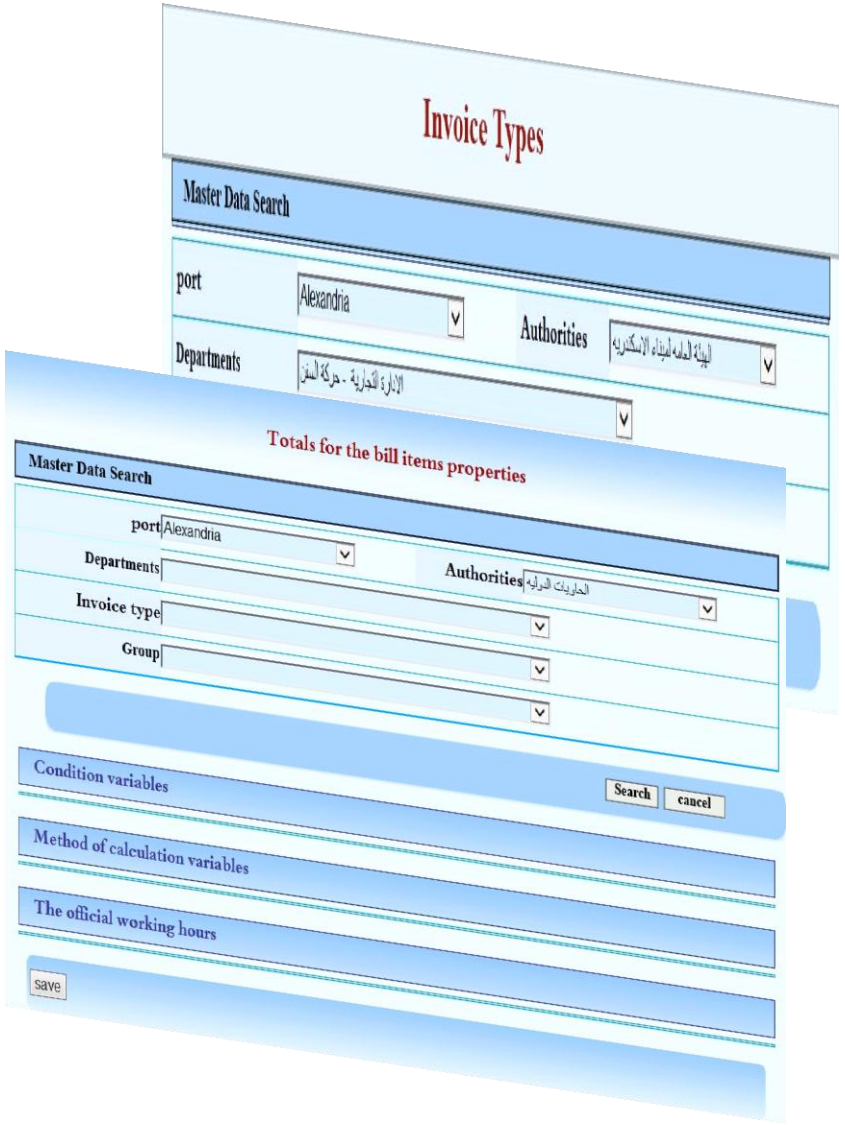
- ✓ Better control for containers flow inside the terminal
- ✓ Monitor current stored containers and occupancy rate
- ✓ Ease, speed and accuracy in issuing related invoices
- ✓ Ability to analyze data for decision support concerning bottlenecks, best utilization for terminal resources and enhancing operational objectives



❑ Billing System

❑ Functionality

- ✓ Provides a dynamic engine for defining different invoices with their related variables, conditions, calculation methods and categories.
- ✓ Provides a flexible definition for different fees
- ✓ Provides a flexible definition for invoice serial
- ✓ Handles taxes and discounts for all invoices
- ✓ Handles invoice generation with its business process including the necessary reviews and approval cycles
- ✓ Handles debit/credit notes
- ✓ Integrates with other systems for invoice payment

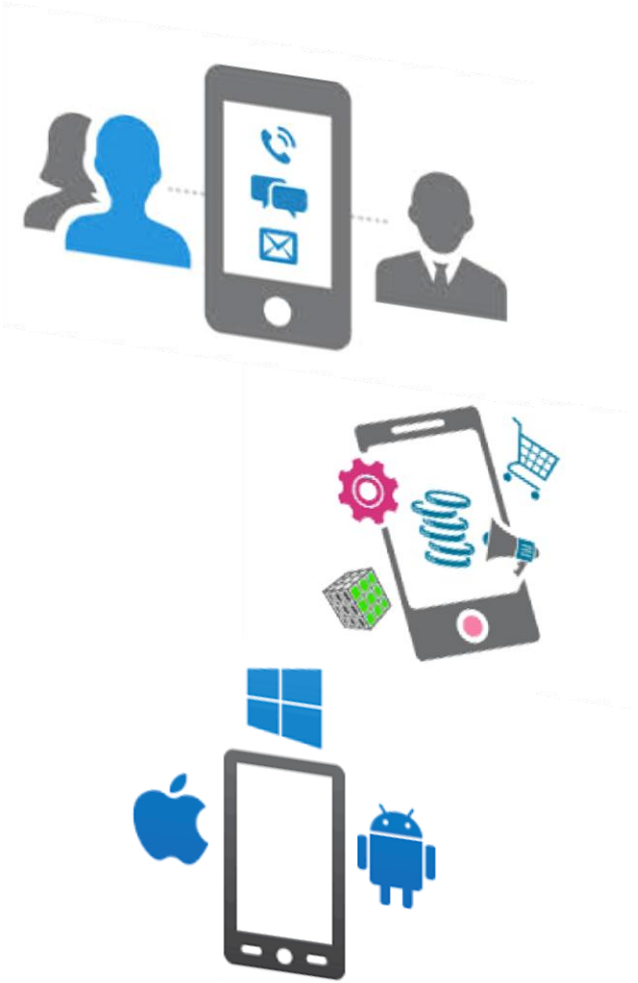


❑ Value

- ✓ Ease, speed and accuracy in issuing all invoices
- ✓ Enhance receivables cycle by quick and accurate issuing of invoices and continuous follow up for payments
- ✓ Better service management for customers

❑ Port Mobile Applications

Mobile applications provide port customers with innovative tools that help them work more efficiently.



Container/ cargo stakeholder

Provide notifications and queries related to container/cargo availability information in real time and invoice status

Shipping agents

Provide notifications and queries related to vessel arrival, moves, start/end stevedoring operations, holds, departure and invoice status.

Transportation companies

Provide notifications and queries related to entry, truck load/discharge operations, net cargo weight, truck holds and cashier bills.

Companies working inside the port

Provide notifications and queries related to activity authorization, yard rental approval and invoice status

❑ Port KPIs

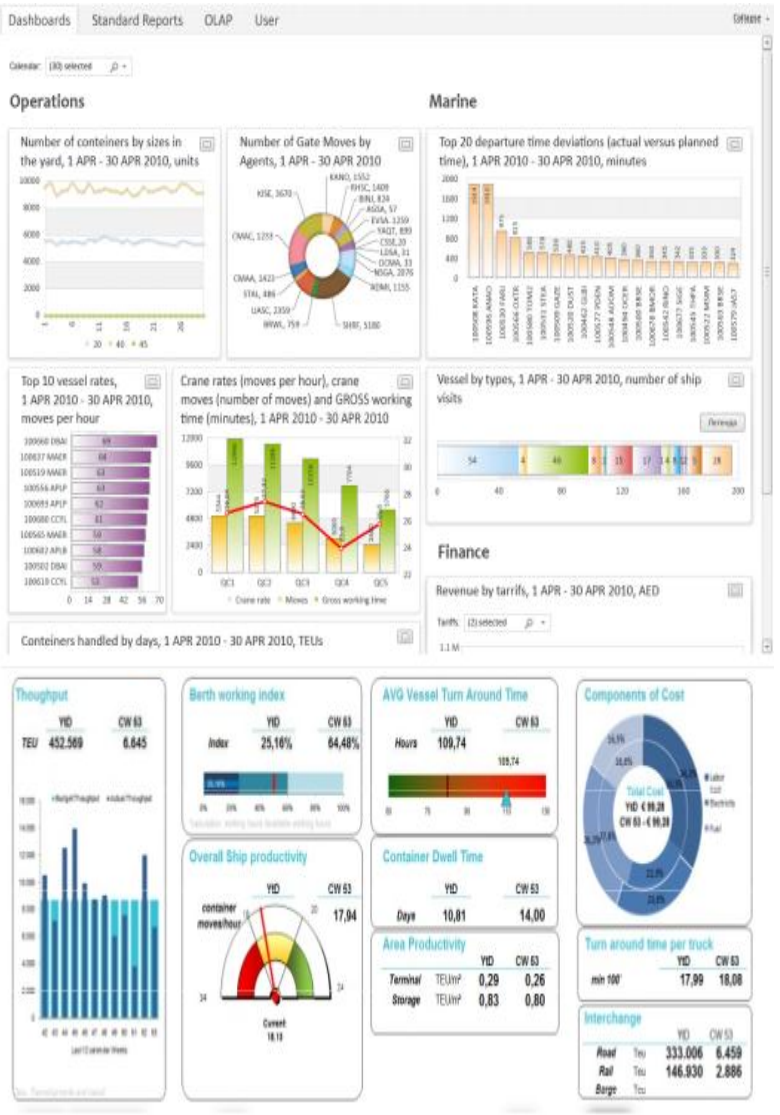
Port Performance indicators provide insight to port management into the operation of key areas.

Port KPIs are mainly used to:

- ✓ Improve port operations
- ✓ Provide appropriate basis for planning future port development

Business Intelligence software tools are used to handle port KPIs

- ✓ Collect data from multiple data sources (Databases, XML, email, excel, ..)
- ✓ Prepare Data for analysis
- ✓ Develop and run queries against the data
- ✓ Generate reports
- ✓ Build interactive dashboards



❑ Port KPIs

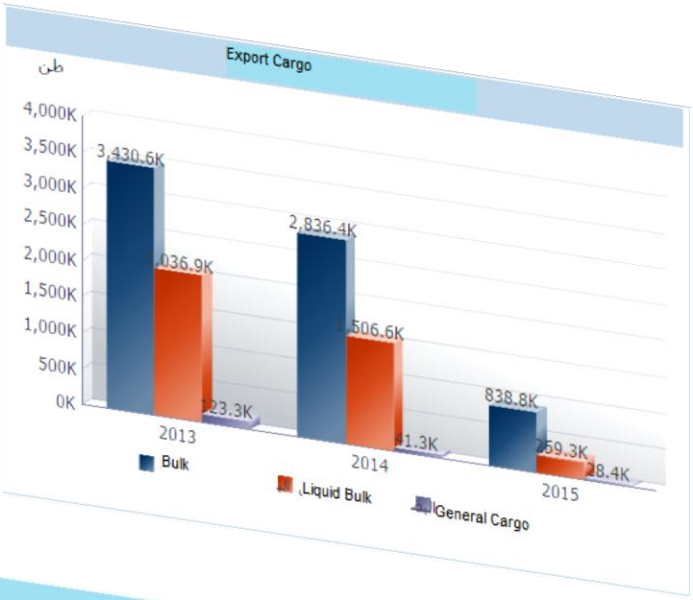
Port KPIs are categorized into:

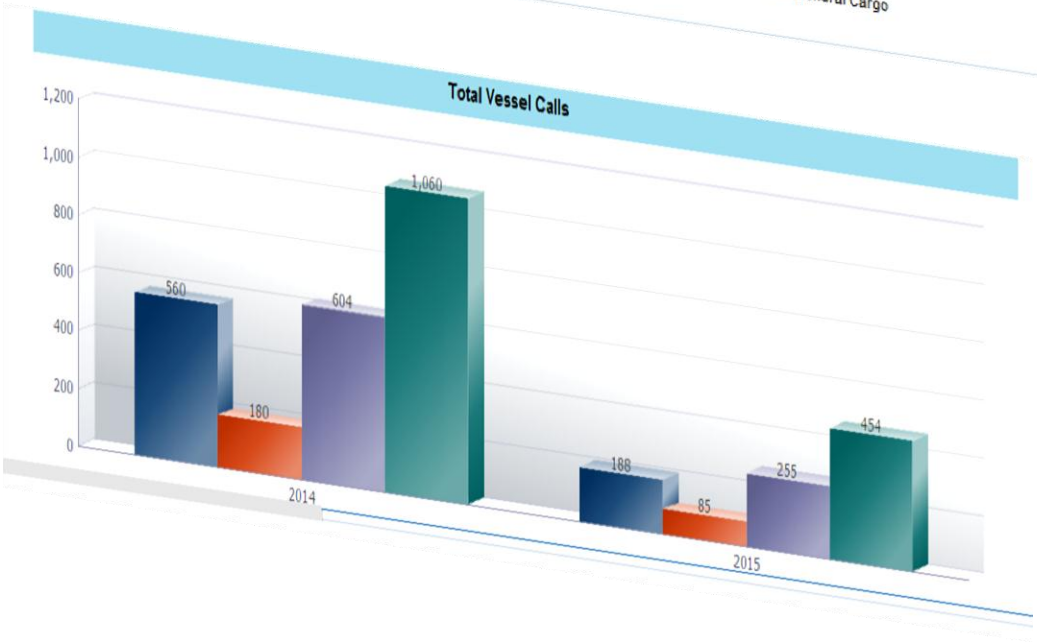
- ✓ Measures Of Production
- ✓ Measures Of Productivity
- ✓ Measures Of Utilization
- ✓ Measures Of Service

Measures Of Production

Are measures of the level of activity of the business (Traffic)

- ❑ Indicators
  - Total Vessel Calls per year
  - Total General Cargo per year
  - Total Bulk per year
  - Total TEUs per year

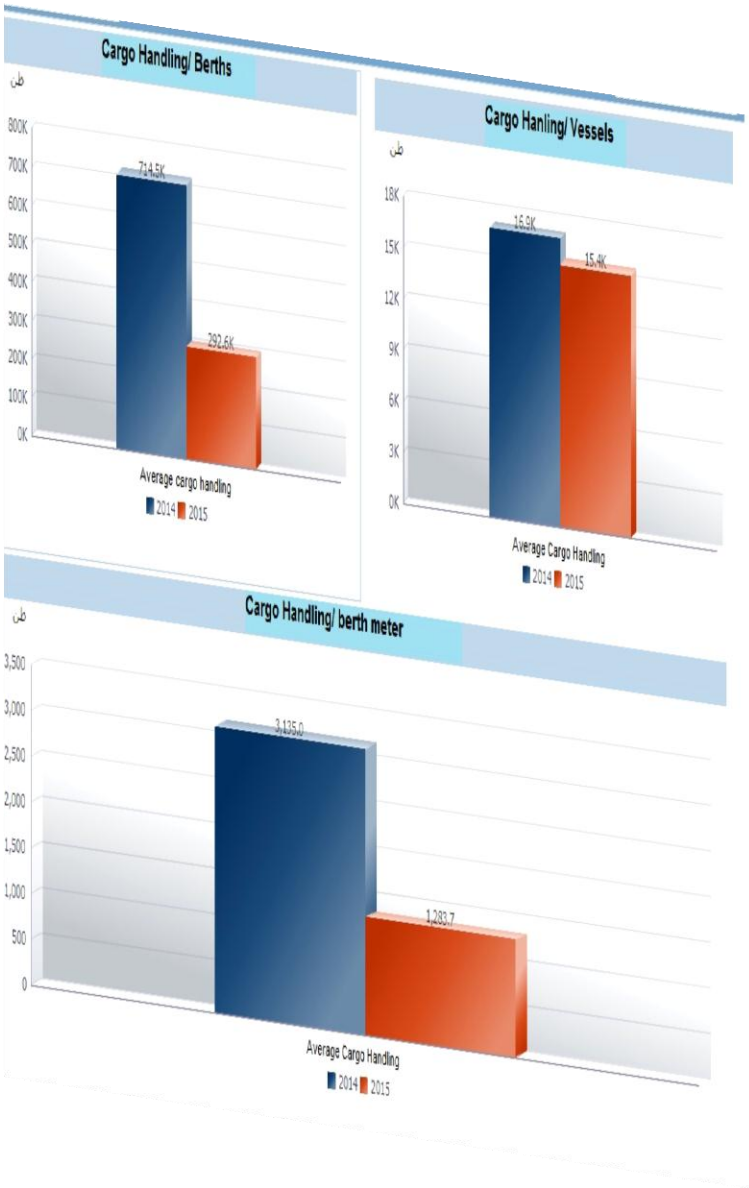




Measures Of Productivity

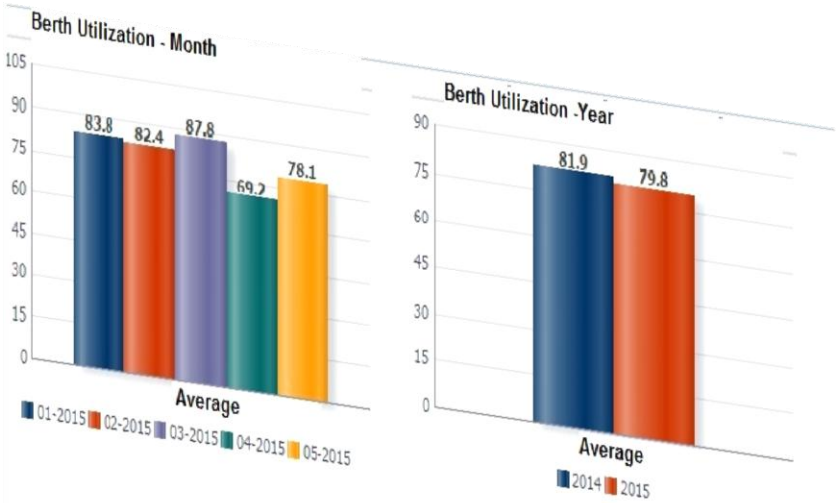
Determine the efficiency of port operations in terms of the ratio of output to input.

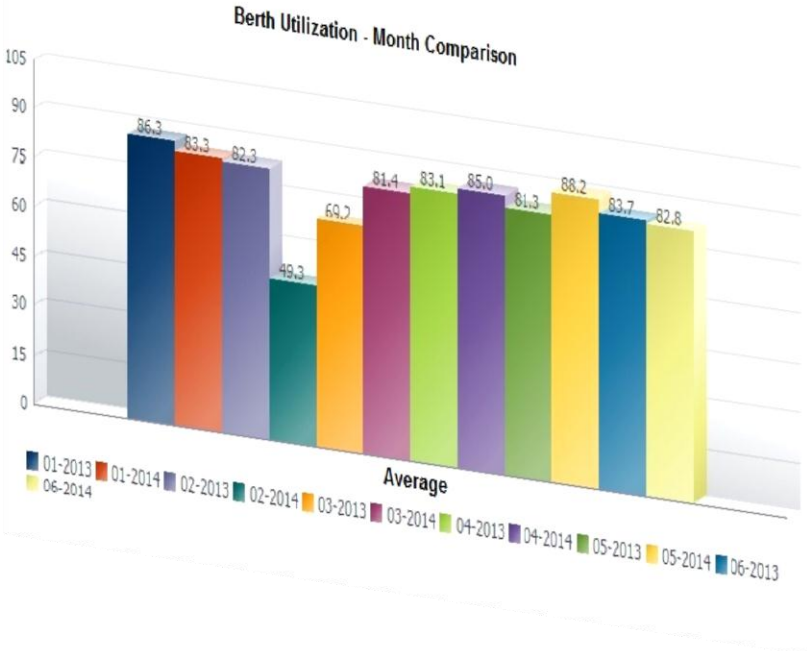
- ❑ Indicators
  - Average Throughput per linear meter of berths
  - Tonnage handled per vessel a day
  - TEUs per crane (hook) hour
  - Cargo tonnage per crane (hook) hour
  - Berth throughput
  - Dwell Time



Measures Of Utilization

indicating how intensively resources are used. They are usually expressed as a ratio between the actual use of a resource and the maximum possible use of that resource over a particular period of time





❑ Indicators

- Berth utilization rate
- Berth occupancy rate
- Yard Utilization rate
- Equipment utilization rate

❑ Port KPIs

Measures Of Service

indicate the quality of service to the customers

- ❑ Indicators
  - Average ship turn-round time
  - Average vessel time at berth
  - Average vessel time outside
  - Average waiting
  - Average truck turn-round time
  - Average Rail turn-round time