



Maximising Port Productivity: Strategies for mixed cargo terminals

Agenda

- Gateways Of Tomorrow: Exploring the business value of digital transformation for general and mixed cargo terminals

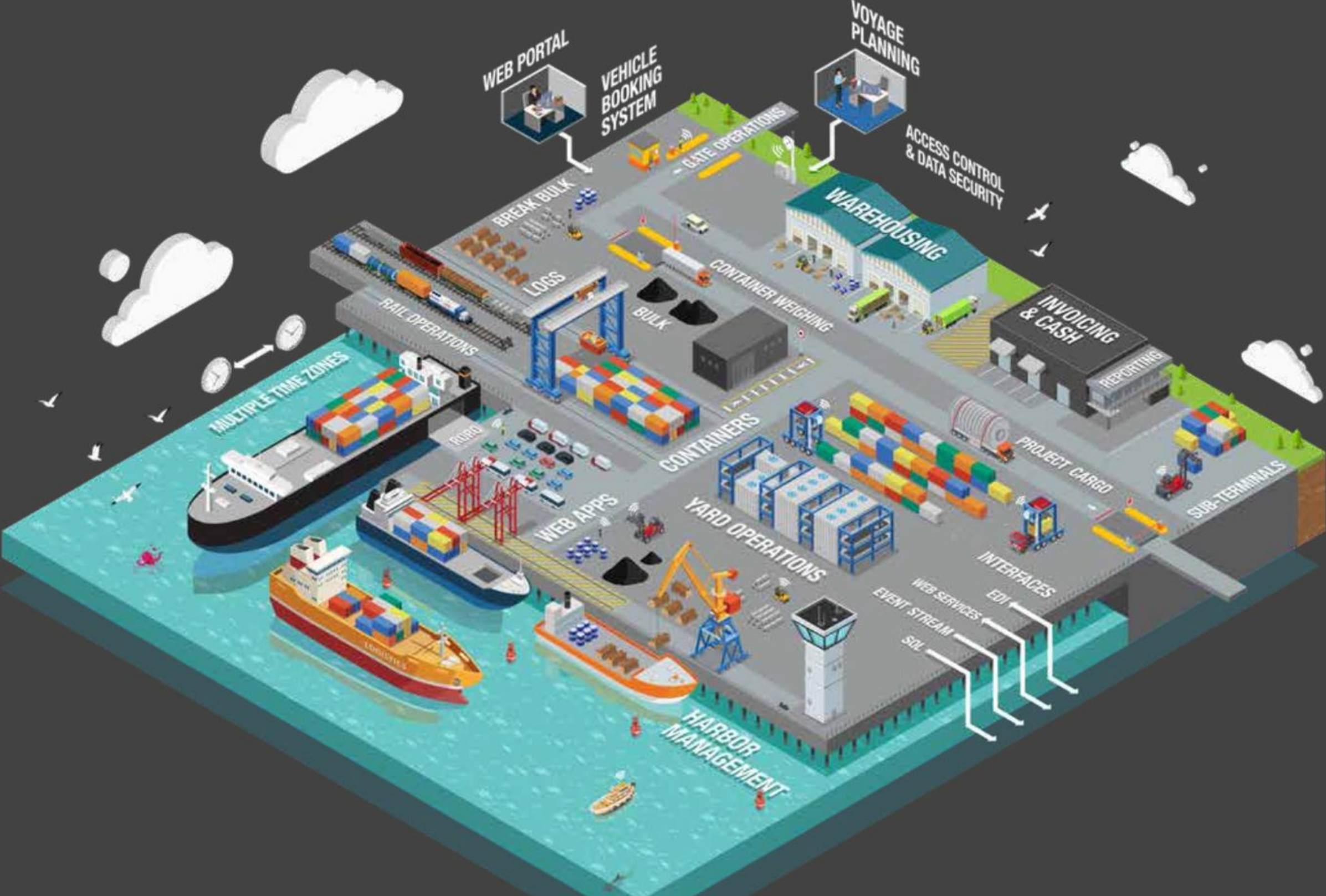


Understanding the general cargo landscape

Different types of terminals will handle different commodities, although some may handle a combination and are referred to as mixed terminals.



CORE OPERATIONS OF A GENERAL CARGO TERMINAL



Physical infrastructure
Equipment
Vehicles
Technologies
Human resources

Today's Key Challenges:

- **Manual processes and record-keeping**
- **The absence of automation and standardisation**
- **A lack of system integration**
- **Inefficient coordination**
- **A lack of data centralisation**
- **Underutilised yard space**
- **Evolving trade patterns**
- **Cyber security**



MAIN CHALLENGES



VESSEL ACTIVITIES

- ▶ Allocating vessel berths and optimising vessel turnaround time
- ▶ Handling cargo
- ▶ Communicating with shipping lines to synchronise operations

IMPACT

Scheduling berths and planning loading/unloading time to expedite turnaround relies on efficient communication with the vessel for its ETA. Manual communication via back-and-forth emails and phone calls does not provide information in real time.

Delays in vessel communication can lead to reactive and inefficient decision-making on berth and resource allocation.



YARD ACTIVITIES

- ▶ Efficient utilisation of yard space
- ▶ Maintaining fully functioning and reliable equipment
- ▶ Cargo tracking and allocation. It is estimated that 8–10% of annual transportation budgets are wasted due to yard inefficiencies.¹⁹

Inefficient management of limited yard space results in lost business opportunities, especially for competitive spot cargo.

Scheduling and managing the use of yard equipment can be difficult especially when trying to connect this with yard and gate operations. Equipment failures and unexpected downtime, or truck or vessel delays exacerbate the issue.

Tracking various packages and forms of cargo in the terminal is difficult and cargo often goes missing.

MAIN CHALLENGES



HARBOUR ACTIVITIES

- ▶ Invoicing for harbour activities

IMPACT

Manual records of harbour activities can lead to incorrect billing and loss of revenue for the terminal.



GATE OPERATIONS

- ▶ Truck scheduling and management

Vehicles entering and leaving the terminal through the gate must be closely monitored and permission granted. Manual checking is lengthy and prone to human error.

Insufficient truck management may lead to long transfer times, affecting vessel loading/unloading and turnaround.



RAIL OPERATIONS

- ▶ Train scheduling and management

Inefficient train scheduling can affect a vessel's turnaround time.

Manual document handling increases time to transfer cargo.

Delivering business

value with technology:

- **Asset optimisation**
- **Process automation and standardisation**
- **Interoperability**
- **Cybersecurity**

Recommendations





**Understand your process
inefficiencies first**



**Start with the quick
wins**



**Be patient and focus on change
management**





Deploy proven technologies

**Focus on configuration
over customisation**

