

Solve complex logistics and cargo challenges.

Ideas for improving the competitiveness of mixed cargo terminal ports



Time to level the playing field?



Information technology is leveling the playing field in the port sector, enabling agile and ambitious ports to take on their giant counterparts.

After 20 years of helping ports use IT to improve their competitiveness, Jade Logistics has learned a lot about turning the challenges of managing mixed cargo into opportunities.

In this eBook we've put together a few ideas about how your terminal operation can make this happen.

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Introduction: The mixed cargo seascape.



Modern shipping ports are not logistical islands anymore, but critical components of global transport networks and product supply chains. And as their importance grows, so does the competition within regional ports.

Since the advent of the cargo container half a century ago, the share of non-containerized, mixed cargo in worldwide shipping logistics has continued to decline. Until now.

The decline in the share of mixed cargo operations has plateaued as commodities like steel, pulp, paper, and fresh produce are more efficiently transported without the use of containers. Non-containerized cargo consistently makes up more than a third of total general maritime cargo transport.

While mega-ports pursue the container business with single minded focus, capitalizing on their economies of scale, growing ports can seize the opportunity that lies in the mixed cargo sector.

Break bulk terminals are not quay-side areas offering cargo shifting facilities anymore. Instead, they're vital links supporting regional export-oriented businesses and commodity traders. A number of ports around the world are realizing the potential of optimizing terminal operations to handle mixed cargo and adjusting their policies and processes accordingly.



Idea 01

**Think differently
about your TOS.**

Think differently about your TOS.



A rock solid TOS is the foundation for an ambitious port raring to take on bigger competition. If that TOS is simply an exact replication of your competitor's systems then any real advantage is lost. You need performance AND flexibility.

The significance of a state-of-the-art TOS is not lost on teams managing growing ports, looking to compete with the bigger, established ports. Many of these teams have realized that one of the best ways to achieve differentiation is to achieve efficiency and excellence in processing break bulk and other mixed cargo types that are usually avoided by large ports.

While this is a perfectly sound strategy for the growing port, it also needs to be complemented by a TOS that facilitates the execution of this strategy.

A TOS designed primarily to process the movement of millions of containers, isn't likely to be a comfortable fit.

Most off-the-shelf TOS are built for large established ports with little consideration for mixed cargo functionality or configurations tailored for a port's specific needs. They are someone else's idea of how to run a port operation.

A perfect fit for a port is a TOS that is based on industry leading process benchmarks and best practices, while providing the flexibility for adaptations that may be required to meet the individual needs of the port.

INSIGHT: Most off-the-shelf TOS are someone else's idea of how to run a port operation.

Idea 02

**Turn the challenges
of mixed cargo into
an advantage.**



Turn the challenges of mixed cargo into an advantage.



While port authorities across the world have been focused on developing infrastructure and systems with standard size containers as the central focus, non-standard, mixed cargo presents a unique challenge. Similar challenges arise in trying to track mixed cargo with systems and machines purpose built to scan and track containers.

Most yard configurations are operated with full lines of container handling equipment without many customizations for handling break bulk or project cargo, resulting in less than optimal space utilization and vessel turnaround times. Information systems also reflect this container focus, with many TOS products not flexible enough to manage non-standard sized cargo.

There are a number of advantages for all stakeholders involved in a port to invest in capabilities for the efficient handling of mixed cargo. Advantages of scale exist from a product point of view – handling the same product both conventionally and containerized can generate operational efficiencies. In addition to that, a terminal or a shipping line can offer its customers a wider range of services.

It is increasingly important for the operations of a growing port to demonstrate the ability to combine mixed cargo and containers. For a port to be competitive in terms of quality, throughput and cost, it all boils down to efficiency of operations and the speed with which ships can be turned around carrying the most optimal loads.

While the challenge of managing containerized and mixed cargo within the same operational framework may seem daunting at the start, it can be tackled and indeed be turned into a highly profitable operation with a state-of-the-art TOS that is aligned with the specifications of the port.

In a tough economic climate where capital is constrained for ports, relatively little spending on a sophisticated TOS goes a very long way, especially one that allows the port to raise efficiency and capital utilization levels and extract every bit of revenue potential with existing physical infrastructure.

Implementing a TOS that is customized to the needs of the port has the potential to vastly improve vessel turnaround times as well. While a port can merely 'make do' with a stock standard TOS developed with a 'one size fits all' approach that focuses only on container cargo management, an ambitious, growing port needs a system that is customizable and especially suited to handling containers and mixed cargo.

INSIGHT: While the challenge of managing containerized and mixed cargo within the same operational framework may seem daunting at the start, it can be turned into a highly profitable operation.



Idea 03

**You can't
compromise and still
achieve efficiencies.**



You can't compromise and still achieve efficiencies.



Systems designed to manage multi cargo operations will deliver the right efficiencies. A state of the art, comprehensive TOS efficiently performs all standard processes using bills of lading, positions cargo within user-defined storage areas, with placement restriction capabilities to ensure logical placement of cargo, right through to eventual delivery via rail, road, vessel or packed into containers for handling.

Modern terminal operating systems work on and with most standard computing hardware (mobile devices, barcodes, desktops and laptops) negating the need for expensive custom manufactured devices.

Foremost amongst the many advantages of deploying an advanced TOS to handle mixed cargo is the visibility of current operations in a simple graphical interface, and measurable proofs of efficiencies gained with clearly defined Key Performance Indicators (KPIs).

KPI data presented in an easy, digestible format allows ports to monitor and analyze performance and improve operations to achieve greater efficiencies.

Port-centric operations stand to gain immensely from the ability to plan further ahead and offer greater visibility of the berths and facilities available for the port's customers.

INSIGHT: A system designed to manage boxes won't deliver efficiencies for mixed cargo operations.

Idea 04

**Customize with
confidence.**



Customize with confidence.



Port authorities are always in a position of strength if they are supported by a proven TOS developer and vendor who understands the complexities of the trade, can provide high level advice in terms of implementing industry best practices, as well as building in configurations to the system specific to the port.

This is usually the ideal approach from most perspectives, most of all from a total cost of ownership (TCO) point of view. And since all customizations are done by the original vendor, all post implementation support and upgrades are easy.

Many enthusiastic IT teams at growing ports choose to heavily customize a proprietary TOS to suit the unique needs of their port. While it is always a worthy intent, it often adds to the complexity of the code and increases the cost of maintenance (due to bug fixing that may be required in case of any errors arising). It also limits the amount of technical support that can be provided by the original vendor.

INSIGHT: The right balance between adapting business processes and customizing system functionality will provide the greatest return on investment.

Checklist: Considering your new TOS.



Managing mixed cargo can be a challenge, or an opportunity to claim market space. The ambitious, growing port needs a capable systems partner who understands the complexities involved in moving TEUs as well as vehicles, steel, forestry products and other assorted mixed cargo, and can help simplify the entire process.

If you're in a team leading an ambitious port's plans to increase its productivity and competitiveness, and improve mixed cargo handling, we've put together a checklist of questions to get you started. These will help you understand the strengths and weaknesses of your current infrastructure and processes, and how to choose a modern TOS solution that will increase the productivity and efficiencies at the port.

01. Is it rock solid?

The top priority (and one that some ports underestimate) is the robustness and dependability of the system. A modern TOS is a mission critical application and every hour lost due to technical glitches means loss of business, revenue and reputation.

02. Is it backed by port people?

It also helps to understand the team behind the solutions and its background. A TOS supplier may have the best software people, but domain expertise is crucial for the team producing and implementing the system. Though TOS are fundamentally built on software and hardware, it is not merely technical skill that sets the implementation on the path to success. A thorough understanding of the complexities behind the areas of shipping, logistics and port operations is necessary to build a TOS that complements existing processes and enhances efficiencies.



3. Does it deliver efficiency gains?

A TOS should be able to deliver efficiency gains by increasing throughput capacity at the terminal, decreasing operating costs and optimizing use of existing equipment (e.g. container cranes). Is there proof that it has achieved this for other port operations of a similar size and capability to yours?

4. Is it flexible enough?

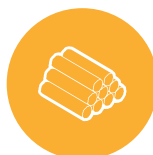
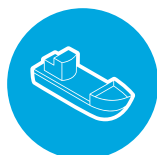
And this can only happen if the solution is built around the specific needs of the port and caters for the multiple variables, scheduling optimization, and exception handling of equipment moves that are unique to the port.

5. Does it focus on automation alone?

Technology can be an enabler and a differentiator. A state of the art TOS can automate most key processes but it cannot replace the decision making abilities of an experienced team. In your search for the ideal TOS, look out for the system that empowers a proficient team, not one that aims to replace them.

6. Can you understand the return on investment?

A TOS implementation is a significant investment and usually happens rarely in the lifetime of the port. Before embarking on the implementation project, detailed and thorough calculations should be made about the return on investment of the solution and the total cost of ownership.



About us.



Master Terminal™ from Jade Logistics is the solution that is powering the growth of ambitious ports across the world.

With a system that is built on the foundations of industry-wide best practices, yet is flexible enough to be able to incorporate the unique needs of each port that it is implemented at, Master Terminal is the trusted and robust solution of choice for port authorities and terminal operators.

CLICK HERE to arrange a consultation with one of our industry experts.



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