

# NEW GENERATION MULTI-PURPOSE TOS: PROPELLING TECHNOLOGICAL ADVANCEMENT

**Next port of call enroute to smart multi-purpose terminal management.**

As the brains of a terminal, TOS improvements are mission-critical to ensuring ports continue to evolve structurally and functionally to manage today's issues as well as predict tomorrow's challenges. A flexible and scalable multi-purpose TOS can be instrumental to helping terminal operators solve the spatial, fiscal and security complexities of today's multi-purpose terminals.





## THE PRESSURE TO PERFORM HAS NEVER BEEN GREATER FOR PORTS

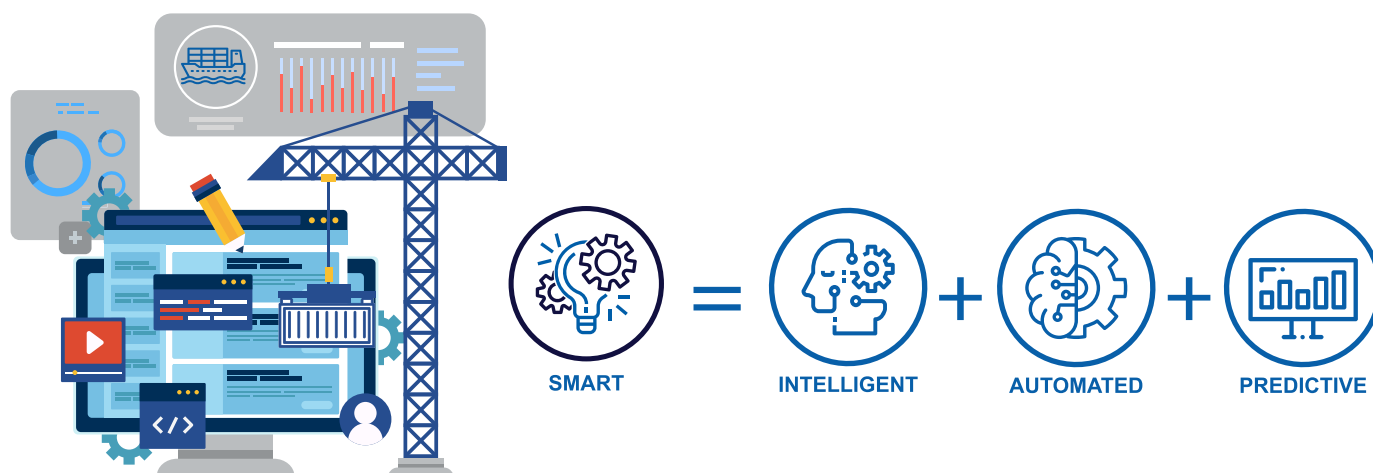
With the advent of mega vessels and consequently larger shipping volumes in the industry, improving berth turnaround times have become even more critical for every stakeholder in the industry supply chain. To gain a sense of volumes, port operators such as Singapore's PSA moved up to 220,000<sup>1</sup> containers daily across its combined global network with a throughput of 36 million TEUs in its flagship Singapore terminal in 2018 alone. And the numbers continue to grow.

However, size and throughput are no longer the only key parameters for measuring port productivity. With policies such as the EU's Transport 2050 Roadmap encouraging a shift in freight transportation from road to rail or water-borne modes, the call for terminals to support multi-modal and multi-cargo

transportation is gaining fast traction. In recent news, Turkish logistics company Arkas Holding announced that its intermodal inland cargo terminal project "Railport" will be launched in 2020, serving both trucks and trains. In Italy, a collaboration between Terminal Container Ravenna and Contship Italia Group's MTO Hannibal will offer an intermodal opportunity for the territory of Ravenna.

The addition of new cargo types and transportation modes requires port operators to chart a new course from digital to smart to ensure continued sustainability and leadership.

The key to success in this landscape will be the ability to deliver superior real-time management to support the needs of terminals across diverse complexities and sizes.



Broadly defined, a smart port leverages the ICT revolution in data analytics, IoT, smart devices and networks to improve end-to-end port connectivity and increase recurring revenue, while lowering costs and reducing environmental impact.

The ideal smart port operates in a predictive state, planning and executing in an automated manner while connecting all stakeholders in the value chain through real-time technology and data.



## MULTI-PURPOSE TOS IS A VERY CURRENT FUTURE

Optimizing for the future starts today. Technology has advanced at such an exponential rate that across the globe, smart ports are already being explored or developed in various stages of progress. While continued system upgrading is a given, terminal operators must ensure that TOS enhancements yield quantifiable value not just in maximizing current productivity but also in delivering the flexibility and versatility needed to future-proof operations.

## THIS PAPER DISCUSSES FIVE ESSENTIAL ELEMENTS THAT A MULTI-PURPOSE TOS SHOULD FULFIL.

### 1. EASE OF USE

Usability can be measured in three ways: user experience, reporting capability and system compatibility. A strong user experience and intuitive interface enables users to acquaint themselves quickly with the TOS's functionalities, expediting training and onboarding. Aside from the front-end experience, terminal operators should also assess the following. Does the TOS provide timely, accurate and detailed reporting? Is it accessible anytime and from anywhere? Does it integrate easily with back-office accounting and billing? New browser-based and cloud computing capabilities are improving accessibility and compatibility as well as dramatically reducing report and analysis turnaround time, driving better predictability of terminal productivity - a key consideration for shipping lines.



### 2. COST-EFFICIENCY

On-premise TOS solutions tend to require massive investment in technical infrastructure. Apart from hardware, software and IT resource cost considerations, scalability for the longer term is another key determinant. Fortunately, technology has now opened up new avenues for terminal operators to explore browser-based solutions that are more cost-effective and quicker to implement. With redundancy and backup management taken care of through cloud server management and web-deployed software updates, IT management can be left to the professionals, freeing up terminal operators to focus on their core business.

### 3. DOWNSTREAM VALUE FOR STAKEHOLDERS

When time is short and safety is paramount, real-time visibility across yard operations makes all the difference between a good and a great TOS. Logistics management is laden with details that can easily go off the rails, so terminal operators need to ensure maximum transparency at all times in order to maintain the confidence of existing stakeholders and win the trust of new ones. The ability to view real depth of details will allow key cargo properties to be quickly identified. This elevates safety and facilitates on-site planning and decision-making through greater transparency and enhanced connectivity and communications.

### 4. ENABLER FOR STRATEGIC DECISION-MAKING

Ever since the statement "Data is the new oil"<sup>2</sup> was first coined in 2006, debates continue to ensue whether data is or is not the world's new "most valuable resource". At the end of the day however, data on its own is just data. To serve real value, it needs to be organized, processed and given a context. Similarly, a great TOS should utilize and convert reported data into a form that enables predictive decision-making so users can evaluate current operational patterns and develop new ones that will elevate the status quo. The TOS should also provide unified workflow management to facilitate real-time communication across all stakeholders for faster and smarter cargo and transportation management.

### 5. FUTURE- PROOF

Smart devices continue to play a key role in the digital world. In any given industry, present-day digital consumers have come to expect user-centric solutions that are both web and mobile-optimized with practical and easy-to-navigate interfaces. An effective TOS infrastructure must deliver immediate impact now and for the future, with the ability to upgrade and upscale to meet the evolving needs of port operators as they grow.





## SMART TOS FOR SMART PORTS

As terminal business and customer demands continue to grow, terminal operators must move even faster to adapt and update TOS capability. An effective multi-purpose TOS should anticipate and support the needs of multi-purpose and multi-terminal operators by delivering cost-effective scalability and compatibility to accommodate greater growth and diversity in customers, data, workflow and resources.

## OPUS TERMINAL M

OPUS Terminal M is an advanced TOS solution designed specifically for multi-purpose terminals. Able to handle all types of general cargo and transportation modes, OPUS Terminal M provides visibility over all aspects of terminal operations via a single smart interface in real-time.

The capability to support multi-terminal needs also allows for the management of separate facilities across different locations and time zones from a single server installation. With a flexible architecture, terminal operators have the option of deploying either on-premise or on cloud.

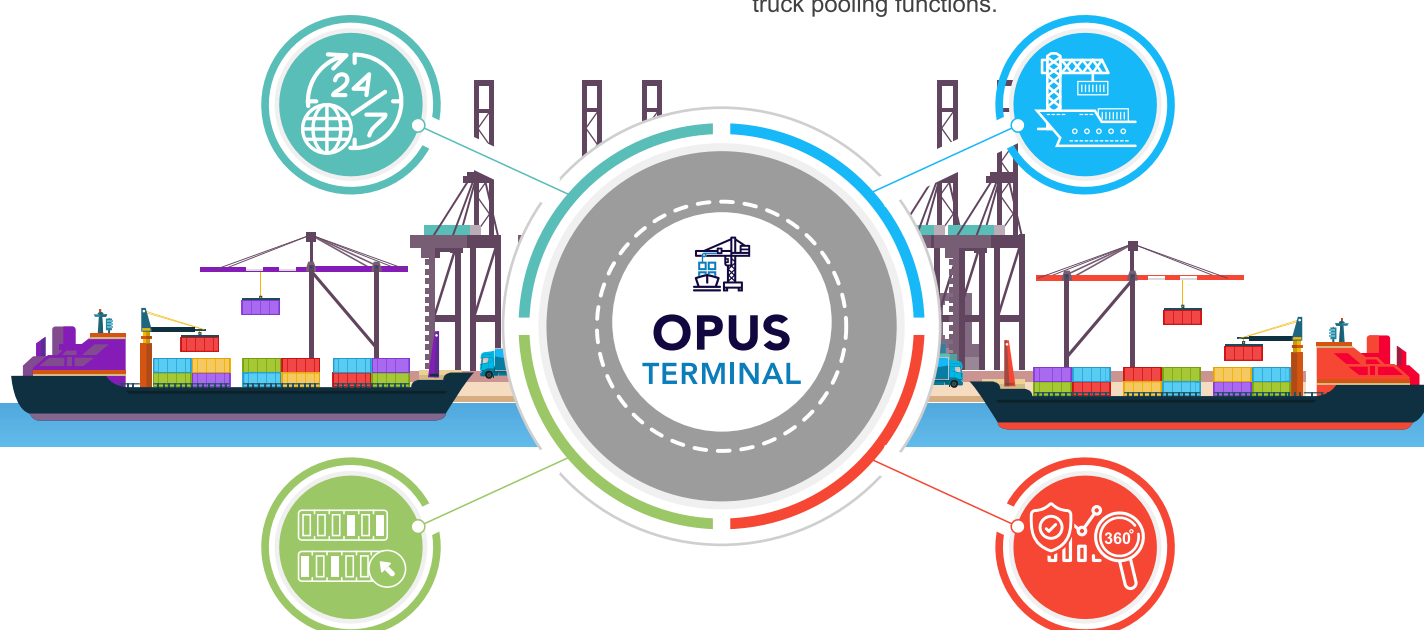
## A FASTER ROUTE TO SMART PORT MANAGEMENT

### ANYTIME ANYWHERE ACCESS

Built on open architecture and mobile-optimized for 24/7 accessibility and superior user experience across browsers and mobile devices.

### ADVANCED CONTAINER FUNCTIONS

Shorter preparation time for vessel arrivals and prior truck assignment with advanced vessel planning, pattern execution, dynamic yard planning, automated crane sequencing and truck pooling functions.



### CENTRALIZED CONTROL FOR MULTI-CARGO AND MULTI-MODAL OPERATIONS

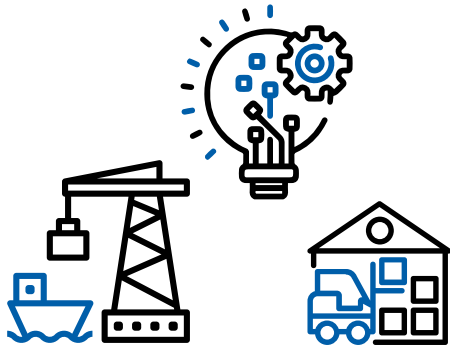
Fully customizable and scalable multi-purpose TOS with adaptability to support all types of cargo including containers, RORO, bulk, general cargo and project cargo; as well as all types of vessels and storage facilities.

### UNPARALLELED 360° VISIBILITY

2D and 3D views with zoom functionality and ability to filter and display cargo with similar properties for real depth of details, elevating on-site decision-making and communication across operators and tallymen as well as real-time safety management.

## OPTIMIZE AND SECURE YOUR FUTURE

CyberLogitec is charting the digital future for logistics and transportation with next-generation innovative solutions designed for superior scalability, visibility and collaboration. From maritime shipping operations, port and terminal operating systems to logistics forwarding and warehouse management, our integrated solutions with advanced algorithms help you digitalize and automate processes to improve competitiveness, productivity and customer service across all levels of your organization.



**Flexible and scalable multi-purpose TOS is key to helping terminal operators solve complexities of today's multi-purpose terminals.**

**SPEAK TO US TO FIND OUT HOW OPUS TERMINAL M CAN OPTIMIZE YOUR TERMINAL OPERATIONS FOR TODAY'S CHALLENGES AND TOMORROW'S OPPORTUNITIES.**

**VISIT [WWW.CYBERLOGITEC.COM](http://WWW.CYBERLOGITEC.COM)**

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