MARITIME LOGISTICS
PROFESSIONAL

Q4 2016 | *Volume 6, Issue 4*

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MahiMahi Master

Exploring a Life at Sea with Matson's Ted Bernhard

HANJIN
THE LOGISTICS FALLOUT

HARVEY GULF
HOLDING A STEADY COURSE

SOUTH CAROLINA
PORT AUTHORITY UPS ITS GAME


GREAT LAKES


DOUGLAS B. MACKIE


ELLIS ISLAND

MARITIME LOGISTICS PROFESSIONAL

Q4 2016
Volume 6
Number 4

Seaspan

SC Ports

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ON THE COVER

Captain Theodore "Ted" Bernhard has led the quintessential maritime life, the majority of his 37 years at sea at the helm of a Matson containership. *MLP* explores the pro's and con's of a life and career at sea with Bernhard, starting on page 30.

Image: Franziska Bernhard


MAN Turbocharger
On top of engine performance
MAN

The Contributors

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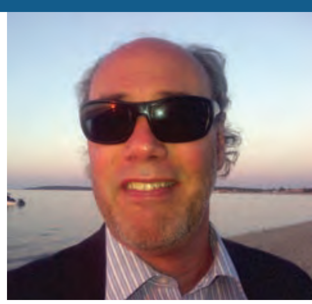

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1 **William P. Doyle** is a Commissioner with the U.S. Federal Maritime Commission. The FMC, among other things, regulates liner companies, ocean transportation intermediaries and marine terminal operators.

2 **Dr. Jim Giermanski** is the Chairman of Powers Global Holdings, Inc. and President of Powers International, LLC, an international transportation security company. He has a Masters degree from the University of North Carolina in Charlotte, a Masters from Florida International University, and a Doctorate from the University of Miami. He is a graduate of Air Command and Staff College, and the Air War College. He was a former FBI special agent, OSI special agent and a Colonel in the Office of Special Investigations where he handled counterintelligence matters.

3 **Richard Greiner** is a Moore Stephens Partner, in their Shipping & Transport group. He Richard has over 30 years experience in providing assurance and advisory services to the shipping and offshore maritime industries. A frequent speaker at shipping events, he is a council member of the Ports and Terminals Group, Maritime London and a trustee of the Maritime London Officer Cadet Scholarship.

4 **Patricia Keefe** is a veteran journalist, editor and commentator who writes about technology, business and maritime topics.

5 **Barry Parker** of bdp1 Consulting Ltd provides strategic and tactical support, including analytics and communications, to businesses across the maritime spectrum.

MARITIME LOGISTICS PROFESSIONAL

ISSN - 24739308
USPS # 005-893

HQ 118 E. 25th St., 2nd Floor
New York, NY 10010 USA

Tel +1 212 477 6700
Fax +1 212 254 6271

URL www.MaritimeLogisticsProfessional.com
Email trauthwein@marinelink.com

Maritime Logistics Professional (ISSN 24739308) is published bi-monthly (6 times per year) by New Wave Media, 118 E. 25th St., 2nd Floor, New York, NY 10010-1062. Periodicals postage paid at New York, NY and additional mailing offices.

POSTMASTER: Send all UAA to CFS. NON-POSTAL AND MILITARY FACILITIES send address corrections to Maritime Logistics Professional 850 Montauk Hwy, #867 Bayport, NY 11705.

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Ministry of transport of Colombia

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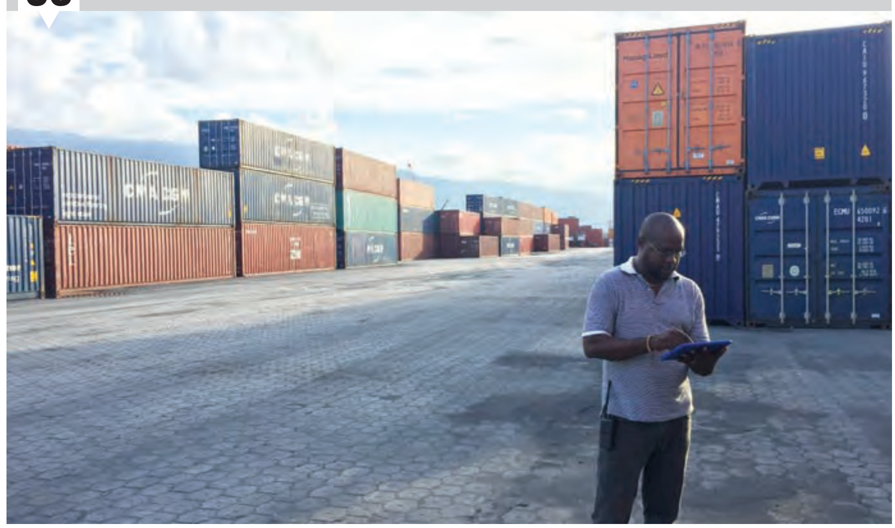


Editor's Note

There is a lot more to maritime logistics than that which meets the naked eye. That much became painfully evident as the fourth quarter began, and it certainly does not look like that trend shows any signs up letting up. The Hanjin collapse was only one part of the total story for ocean commerce, but it was no doubt the 'loss leader' in a disappointing year for many maritime sectors. With more pain to come, there is, nevertheless, some good news to balance the bad.

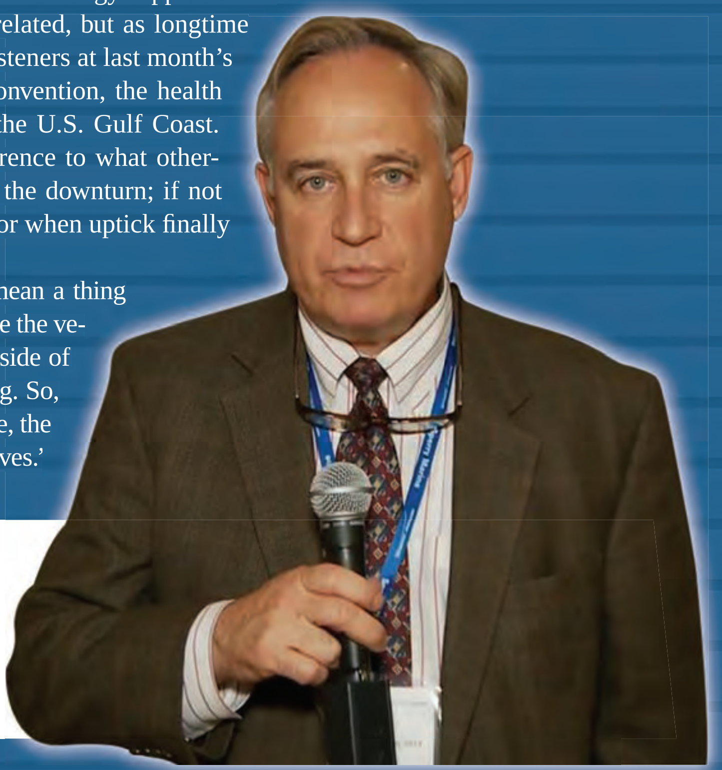
From this side of the pond, and as liner companies try to regroup in a post-Hanjin market, the Federal Maritime Commission watched closely as new alliances emerged. They also acted when it became apparent that aspects of these capacity-sharing agreements might adversely impact U.S.-based maritime service providers. Separately, and echoing the concerns of other stakeholders on the commercial side, FMC Commissioner William P. Doyle reminded the waterfront that "It is time for all of the stakeholders to take a hard look at their partners within these shipping alliances. And, when there is trouble, the partners should step in to help." That's good advice.

Long after the shock of the sensational news of the Hanjin Shipping debacle had worn off, the aftermath of that seismic event is still ongoing, and significantly impacting the ocean shipping sectors. In this edition, ***Maritime Logistics Professional*** contributor Barry Parker weighed in with a comprehensive look into the crisis, with input from all sides of the story – legal, finance, regulatory, logistics – and yes, the customers themselves who were left holding an empty stocking, just as the holiday season was set to kick off. That story begins on page 26.

Containerships are not the only maritime sector facing pressure at the moment. The dry bulk side continues to experience low rates and its own version of overcapacity. At the same time, the prolonged decline in the price of oil weighs on offshore energy support stakeholders. It is easy to try and separate the three issues as unrelated, but as longtime industry analyst and energy economist Dr. Loren Scott told listeners at last month's annual American Association of Port Authorities (AAPA) convention, the health of offshore energy is important to our ports, especially on the U.S. Gulf Coast. Still, there are offshore operators who – through strict adherence to what otherwise might look like a simple business plan – are surviving the downturn; if not with gusto, then certainly with the wherewithal to be a survivor when uptick finally comes. The good news begins on page 44.

Finally, all the ships in the world, filled to capacity, won't mean a thing without efficient ports and the infrastructure necessary to provide the vehicle to connect the intermodal dots from A to Z. On the U.S. side of the pond, the scramble to deepen and modernize is in full swing. So, what does it take to be a world class port – and stay there? Inside, the South Carolina Ports Authority thinks they have 'all the right moves.'

Inside the Intermodal Equation



Joseph Keefe, Editor | **keefe@marinelink.com**

UNITED STATES POSTAL SERVICE®

Statement of Ownership, Management, and Circulation (Requester Publications Only)

1. Publication Title: Maritime Logistics Professional
2. Publication Number: 0 0 5 - 8 9 3
3. Filing Date: September 28, 2016
4. Issue Frequency: Quarterly
5. Number of Issues Published Annually: 4
6. Annual Subscription Price *(if any)*: None

7. Complete Mailing Address of Known Office of Publication *(Not printer) (Street, city, county, state, and ZIP+4®)*
New Wave Media International
118 East 25th. St.
New York, NY 10010

Contact Person: Dale L. Barnett
Telephone *(Include area code)*: 212-477-6700

8. Complete Mailing Address of Headquarters or General Business Office of Publisher *(Not printer)*
New Wave Media International
118 East 25th. St.
New York, NY 10010

9. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor *(Do not leave blank)*

Publisher *(Name and complete mailing address)*
John C. O'Malley
New Wave Media International
118 East 25th. St
New York, NY 10010

Editor *(Name and complete mailing address)*
Greg Trauthwein
New Wave Media International
118 East 25th. St
New York, NY 10010

Managing Editor *(Name and complete mailing address)*
Joseph Keefe
New Wave Media International
118 East 25th. St
New York, NY 10010

10. Owner *(Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a nonprofit organization, give its name and address.)*

Full Name	Complete Mailing Address
John C. O'Malley	New Wave Media International
	118 East 25th. St.
	New York, NY 10010

11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box → ☒ None

Full Name	Complete Mailing Address

12. Tax Status *(For completion by nonprofit organizations authorized to mail at nonprofit rates) (Check one)*
The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes:
☒ Has Not Changed During Preceding 12 Months
☐ Has Changed During Preceding 12 Months *(Publisher must submit explanation of change with this statement)*

PS Form **3526-R**, September 2007 *(Page 1 of 3 (Instructions Page 3))* PSN: 7530-09-000-8855 **PRIVACY NOTICE:** See our privacy policy on www.usps.com

13. Publication Title: Maritime Logistics Professional
14. Issue Date for Circulation Data Below: Q3 (Third Quarter) September 201

15. Extent and Nature of Circulation: Requester		Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date
a. Total Number of Copies *(Net press run)*		17,916	20,000
b. Legitimate Paid and/or Requested Distribution *(By Mail and Outside the Mail)*	(1) Outside County Paid/Requested Mail Subscriptions stated on PS Form 3541. *(Include direct written request from recipient, telemarketing and Internet requests from recipient, paid subscriptions including nominal rate subscriptions, employer requests, advertiser's proof copies, and exchange copies.)*	16,486	17,670
	(2) In-County Paid/Requested Mail Subscriptions stated on PS Form 3541. *(Include direct written request from recipient, telemarketing and Internet requests from recipient, paid subscriptions including nominal rate subscriptions, employer requests, advertiser's proof copies, and exchange copies.)*	0	0
	(3) Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Paid or Requested Distribution Outside USPS®	0	0
	(4) Requested Copies Distributed by Other Mail Classes Through the USPS (e.g. First-Class Mail®)	708	600
c. Total Paid and/or Requested Circulation *(Sum of 15b (1), (2), (3), and (4))* ▶		17,194	18,270
d. Nonrequested Distribution *(By Mail and Outside the Mail)*	(1) Outside County Nonrequested Copies Stated on PS Form 3541 *(include Sample copies, Requests Over 3 years old, Requests induced by a Premium, Bulk Sales and Requests including Association Requests, Names obtained from Business Directories, Lists, and other sources)*	0	0
	(2) In-County Nonrequested Copies Stated on PS Form 3541 *(include Sample copies, Requests Over 3 years old, Requests induced by a Premium, Bulk Sales and Requests including Association Requests, Names obtained from Business Directories, Lists, and other sources)*	0	0
	(3) Nonrequested Copies Distributed Through the USPS by Other Classes of Mail *(e.g. First-Class Mail, Nonrequestor Copies mailed in excess of 10% Limit mailed at Standard Mail® or Package Services Rates)*	201	785
	(4) Nonrequested Copies Distributed Outside the Mail *(Include Pickup Stands, Trade Shows, Showrooms and Other Sources)*	413	650
e. Total Nonrequested Distribution *(Sum of 15d (1), (2), (3) and (4))*		614	1,435
f. Total Distribution *(Sum of 15c and e)* ▶		17,808	19,705
g. Copies not Distributed *(See Instructions to Publishers #4, (page #3))* ▶		108	295
h. Total *(Sum of 15f and g)*		17,916	20,000
i. Percent Paid and/or Requested Circulation *(15c divided by f times 100)* ▶		97%	93%

16. Publication of Statement of Ownership for a Requester Publication is required and will be printed in the Q4 (4th. Quarter) November 201 issue of this publication.

17. Signature and Title of Editor, Publisher, Business Manager, or Owner: Dale L. Barnett, Circulation Department
Date: Sept. 28, 2016

I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties).

PS Form **3526-R**, September 2007 *(Page 2 of 3)*

FMC FOCUSES ON FAIRNESS
FOR DOMESTIC SERVICE SUPPLIERS

FMC COMMISSIONER WILLIAM P. DOYLE'S FOLLOW-UP STATEMENT ON THE OCEAN ALLIANCE VESSEL SHARING AGREEMENT HIGHLIGHTS JOINT CONTRACTING CONCERNS OF OCEAN CARRIER ALLIANCES WITH U.S. SMALL BUSINESSES AND SUPPLIERS, OCEAN ALLIANCE LANGUAGE CHANGES, CONSIDERATIONS FOR PORTS AND TERMINALS, AND FUTURE CARRIER ALLIANCES.

BY WILLIAM P. DOYLE

On October 21, 2016, the Federal Maritime Commission (FMC) voted to take no further action to delay the implementation of the Ocean Alliance from going into effect, thus allowing the Alliance to become effective on October 24, 2016. The Ocean Alliance members consist of CMA CGM (w/APL), COSCO Shipping (w/CSCL), Evergreen Line and Orient Overseas Container Lines. This Ocean Alliance agreement was filed with the Commission on July 15, 2016. On August 24, 2016, the Commission stopped the clock on its review and notified the parties that it needed additional information known as Request for Additional Information (RFAI).

Joint Contracting, Fairness and Monopsony Concerns

I pay special attention to competition matters especially with respect to small businesses, downstream participants and the upstream -- supplier and vendor markets. Further, a focal point is how ocean carrier alliances could detrimentally affect domestic businesses by exerting their collective market power to jointly negotiate and procure services from third parties and a potential for alliances to exercise monopsony power over suppliers. Indeed, the Ocean Alliance Parties filed their original agreement with language that would allow them to jointly negotiate and jointly procure third party services from suppliers such as tug services, barge services, bunker fuel suppliers, feeder services and/or stevedoring services.

The maritime business community operating in and around the American waterways – rivers, coasts, Great Lakes, and harbors – raised objections to the joint contracting and procurement language. Tens-of-thousands of family wage jobs are supported by these service providers and the U.S. coastal and inland waterways fleet. The crux of the matter is that the Federal Maritime Commission can approve ocean carrier alliances thereby immunizing ocean carriers from certain antitrust related activity, but the Commission does not have the authority to grant immunization for domestic service providers such as tug and barge operators. Therefore, based on fairness it would not be prudent to hand the international ocean carries the authority to collectively act to jointly contract and procure services while the domestic service providers do not have the counter balancing ability to collectively negotiate from their side of the table. Finally, allowing the ocean carriers to collectively joint contract and procure services from third parties raises a monopsony power concern. Monopsony power increases the ability to drive the price of a purchased product, depressing output below what would prevail in the absence of the language provided in the alliance agreement.

Substitute Language Provided in Final Ocean Alliance Agreement

The Ocean Alliance Parties provided substitute language which is included in the finalized version. The changes fall into three general categories: 1.) the scope of the agreement, 2.) the Parties' authority relating to chassis and related services, and 3.) the ability of the parties to jointly negotiate and contract.

First, changes were made that clarified the geographic scope, the range of vessel capacity, and the type of information that could be shared between the Parties under the Agreement. In Article 4, the original text broadly listed continents, regions, and some countries that the Ocean Alliance would trade between. In the final version, an appendix was added listing the specific countries included in the Alliance trade. Similarly, the original text only limited the scope of the Agreement to a maximum capacity of 220 vessels of up to 21,000 TEUs, but additional text was added in Article 5.1 to specify a floor of 130 vessels with a minimum weekly capacity of 130,000 TEUs and to clarify that the maximum weekly capacity would total 250,000 TEUs.

Final language also provides more specificity in the types of information that can be shared between Parties in Article 5.3 and also adds a subsection that prohibits the parties from sharing information on freight rates, prices, tariff items, confidential service contract terms or conditions, individual customer lists, individual marketing plans or proposals, or individual bids.

Second, the changes to Article 5.10 maintain the limited role that carriers have said they wish to have in chassis. Under the original text, Parties could discuss and reach agreement amongst themselves or with third parties (chassis pools, equipment lessors, etc.) on the use and provision of chassis, containers, and related equipment as well as any other related goods or services. The finalized language, however, only allows the parties to meet and discuss matters related to chassis, containers, and equipment.

Third, extensive changes were made to provisions that allowed for joint contracting and procurement. The final language of Articles 5.2(e) and 5.11 removed some joint contracting authorities entirely and limited the remaining authority to jointly contract for transshipment, barge/feeder services, bunker fuel, and facilities by stipulating that those could only occur outside the United States. Article 5.9 was also significantly altered to follow the framework established in the 2M Alliance Agreement (Maersk Line and Mediterranean Shipping Company (MSC). Under that framework, the Parties must negotiate independently and enter into separate contracts with port terminal facilities, marine terminal services (except where a terminal wants to negotiate with the Parties jointly), tug services, stevedoring services, and other services. On the operations side, though, the Parties can still jointly discuss and coordinate on matters such as port schedules, berthing windows, and other operational matters.

Considerations for MTO's and Port Authorities

Another point to consider is since the Ocean Alliance is allowed to jointly negotiate with terminals that agree to negotiate with the Parties jointly, some terminal operators and port authorities may want to explore options for entering into their own alliances for instances where they could perhaps jointly negotiate terms and conditions with the ocean carriers. Recently, in the United States, the ports of Seattle and Tacoma began to synergize under the umbrella of the Northwest Seaport Alliance. In 2001, the port of Copenhagen in Denmark merged with the port of Malmo in Sweden becoming the Copenhagen Malmo Port (CMP) serving as the gateway for cargo moving onto the Baltic States, Russia and Northern Europe. In China, the port of Ningbo merged with the port of Zhoushan in 2006 becoming the Port of Ningbo-Zhoushan on the East China Sea. Ningbo-Zhoushan is world's busiest port based on tonnage of cargo moved.

Awaiting Ocean Carrier Alliance Filing

The Commission anticipates another group of ocean carriers filing THE Alliance agreement which had been expected to consist of Hanjin, Hapag-Lloyd (anticipated w/ United Arab Shipping (UASC)), Kawasaki Kisen Kaisha ("K" Line), Mitsui O.S.K. Lines (MOL), Nippon Yusen Kaisha (NYK) and Yang Ming. However, the Big-3 Japanese carriers – MOL, "K" line and NYK recently announced plans to merge their container line operations into one operational entity. Moreover, Hanjin Line is in receivership and it is not known at this time what the will become final disposition of Hanjin Line or its assets.

Read the Ocean Alliance final agreement:
http://www2.fmc.gov/agreement_lib/012426-000.pdf

William P. Doyle is a Commissioner with the U.S. Federal Maritime Commission. The FMC, among other things, regulates liner companies, ocean transportation intermediaries and marine terminal operators. The thoughts and comments he expresses here are his own and should not be construed to represent the position of the Commission or his fellow Commissioners.

The Weight of Container Regulations

By Jim Giermanski

On September 7, 2016 Department of Homeland Security and the Department of Interior announced the selection and awarding of Powers International to demonstrate Powers' Chain-of-Custody technology for verifying cargo and monitoring its movement from origin to destination on global shipments between the United States and Europe. The Department of Homeland Security and the Department of Interior, have established a public-private partnership called CORE to simultaneously optimize and enhance supply chain security. Specifically, one of its purposes is to demonstrate the value of container security technology available today for use by supply chain stakeholders, and involving public entities,

Because vessel carriers are concerned about these weights, they have designated weight maximums for each container size, and specify what must be reported and by whom. Use of the Powers-Secured process can also accomplish this new requirement by reporting directly to the vessel carrier at the time the container is stuffed, secured, and weighed at origin.

Finally, the Feds are Paying Attention. Is it too Late?

GIERMANSKI

border authorities, and supply chain solution providers.

Interpol, Customs Cooperation Council, DHL, Maersk, and Proctor and Gamble, are just a few of the other partners within the CORE Consortium. The Safe port Act of 2006 demanded that actions be taken to improve the security of the international supply chain through "*controls over access to cargo throughout the supply chain,*" information regarding cargo prior to loading, as determined by the Secretary; and the utilization of container security devices, technologies, policies, or practices that meet standards and criteria established by the Secretary (SEC 216). It also required 100% scanning:

Image: SC Ports

"*SCANNING CONTAINERS.-Subject to section 1318 of title 19, United States Code, not later than December 31, 2007, all containers entering the United States through the 22 ports through which the greatest volume of containers enter the United States by vessel shall be scanned for radiation. To the extent practicable, the Secretary shall deploy next generation radiation detection technology.*" (Section 121).

Looking Back, Forging Ahead

For many years, supply chain security company Powers International has been trying to get the attention of the Department of Homeland Security (DHS) and Customs and Border Protection (CBP) to recognize and test its patented technology process that provides a chain-of-custody control over international shipments not only because it saves money for its users, but also it can (with its partners) replace the impossible requirement of 100% scanning contained in the Safe Port Act of 2006, but rejected by European Union, and the World Customs Organization.

In addition to container security and 100% scanning mandates, the requirement of knowing the weight and verified gross mass (VGM) of cargo in containers being carried by vessel carriers has been added. Vessel carriers – and the regulatory regime itself – are very concerned about weight and its impact on balance, and control during sea voyages. Thus, the IMO's Maritime Safety Committee (MSC) at its 93rd session (May 2014) approved changes to the Safety of Life at Sea (SOLAS) convention regarding a mandatory container weight verification requirement on shippers. Because vessel carriers are concerned about these weights, they have designated weight maximums for each container size, and specify what must be reported and by whom. Use of the Powers-Secured process can also accomplish this new requirement by reporting directly to the vessel carrier at the time the container is stuffed, secured, and weighed at origin.

New Tools

What follows is the detailed function of the Powers-Secured patent and its specific benefits to stakeholders involved in the supply chain. It provides the ability to develop a real-time, auditable chain-of-custody system from origin to destination and provides the benefits of visibility. It also makes available electronic important electronic data indicating location, container access, internal environment such as temperature and the confirmation of cargo and weight at origin and the confirmation of cargo arriving at destination.

The following is a more defined list of benefits from the chain-of-custody process, categorized for each supply chain stakeholder:

SHIPPER

- *Confirmation and electronic certification of proper cargo and quantity leaving the facility at origin*
- *Verified gross mass (VGM) of cargo in containers being carried by vessel carriers.*
- *Weight of loaded container in compliance with the SOLAS guidelines*
- *Control of access and entry into the container*
- *World-wide tracking and location of container for security and asset management*
- *Identifying and placing into the supply chain the identity of the company employee who certifies contents of container at sealing at origin and opening at destination (end-to-end visibility)*
- *Knowledge of departure from foreign port to destination port*
- *Knowledge of carrier's sail or over-the-road or rail transport time*
- *Expedited entry of cargo by CBP and faster through-port time*
- *Data-base intelligence identifying weak points/delays/security- risk areas in the supply chain*
- *Verification of compliance with Incoterms 2010, and UN Convention of*
- *Contracts for the Int'l Sale of Goods (CISG), Articles mandating accurate cargo & quantities to be shipped.*

CARRIER

- *Access control into container and knowledge of container location*
- *Protection against claims by shippers that unauthorized contents were the results of carrier action*
- *Certification and Verification of identity of shipper and contents*
- *Automatic transmission to CBP of container data*
- *Data-base intelligence identifying weak points/delays/security- risk areas in the supply chain*

CUSTOMS

- *Supporting means for Electronic filing of In-Bond applications.*
- *Use of trusted third-party agents of shipper or carrier*
- *Linkage of cargo to a specific container's number at origin*
- *Knowledge of container or trailer arrival and location on 24/7 basis*
- *Knowledge of container/trailer diversion from approved path when necessary*
- *Knowledge of container opening or access into container*
- *Knowledge of which containers need no inspection*
- *Identification of suspect container*
- *Faster transmission of data into CBP and ACE system*
- *Elimination of third-party reporting of trade data (i.e. Border Customs brokers)*
- *Enhanced knowledge of container contents from supervisory employee who certifies contents & quantity at stuffing.*
- *Detection of radioactive materials within a container*

Image: Arviem AG www.arviem.com

A marine container tracking device supported by arviem AG, the Swiss based partner of Powers International LLC.

COMPLIANCE WITH INTERNATIONAL STANDARDS AND PROGRAMS

- *World Customs Organization (WCO), (2005)Single Window approved in U.S. (2006)*
- *IMO's Maritime Safety Committee (MSC) requirements for a loaded container's weight*
- *ISO 28000, Security Management System for the Supply Chain (2007)*
- *Transported Asset Protection Association (TAPA) issues Freight Security Requirements, (2001)*
- *Kyoto Convention ICT Guidelines , (2004)*
- *International Maritime Organization (IMO) Creation of International Ship and*
- *Port Facility Security Code (ISPS) (2004)*
- *UN's Single Window through which "...trade-related information and/or documents need only be submitted once at a single entry point to fulfill all import, export, and transit-related regulatory requirements." (2004)*
- *International Trade Data System (ITDS) establishes a single portal system: ACE and the E-Manifest*
- *Compliance with new ACE (Automated Commercial Environment) requirements*
- *The new Rotterdam Rules liability requirements for vessel carriers*

AUDITABLE COMPLIANCE WITH FINANCIAL TRADE TERMS AND CONTROL OF TRADE FINANCE RISKS

- *Knowledge of product location, control, and title transfer issues*
- *Electronic transmission of required compliant document data*
- *Timely Electronic presentation of appropriate data required by the issuing, confirming, compliance with LoC*
- *Where credit indicates, electronic document presentation & electronic signatures as needed*
- *Automatic storage and examination of electronic data subject to required documents*
- *Electronic record to satisfy presentation requirements*
- *Reduced shipping, handling, and carriage liability*
- *Reduced risks such as the introduction of counterfeit or other illegal cargo, & use of L/Cs in money laundering*

Finally, there is a direct applicability to eliminating or reducing the vulnerabilities associated with supply chain movements of hazmat and pharmaceutical products; specifically:

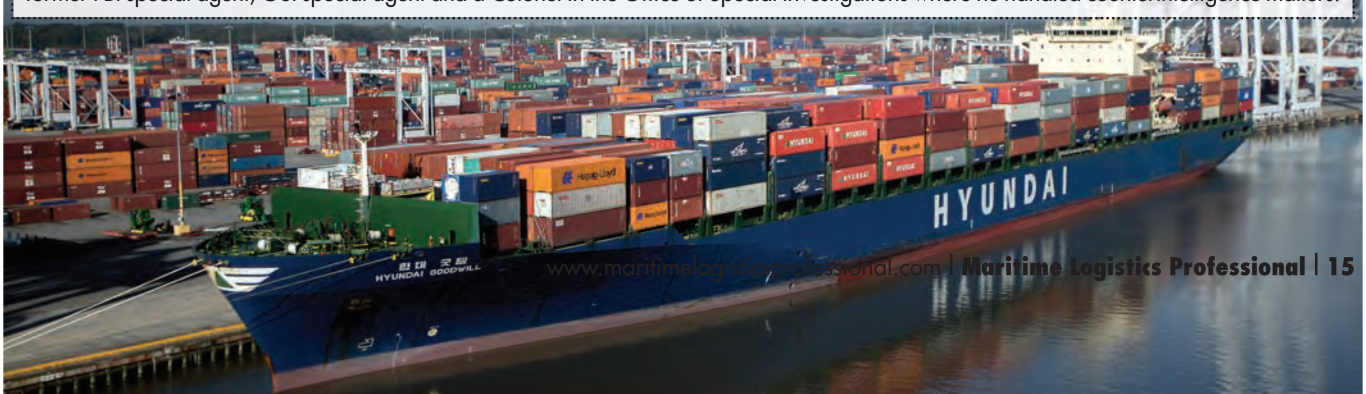
- ***Knowledge of actual cargo by its verification by an identified individual from point of origin***
- ***Linkage of cargo and container number at origin and proper pleading of contents***
- ***Automatic transfer of cargo identity and pleading to a control center or platform***
- ***Monitoring of cargo from origin to destination***
- ***Detection and transmission of any unauthorized access to contents and location of access or breach***
- ***Geo-fencing as need***
- ***Cargo temperature control and transmission as warranted***
- ***Automatic notification of any breach or accident creating a breach or leakage of contents to First Responders***
- ***Automatic instructions to First Responders regarding emergency response to content's flammability, toxicity, corrosiveness, combustion ability and water sensitivity, and irritation factors to the general populous near breach or accident***
- ***Automatic instructions to First Responder on protective actions and proper distance criteria***
- ***In addition to above, the provision of emergency telephone numbers to contiguous nations like Canada and Mexico regarding cross-border movement of dangerous or controlled cargo.***
- ***Provision of an auditable record of movement from origin to destination***

The arrival of the complete cargo supply chain into the electronic data environment will utilize the integration of a mature, globally scalable data technology system. This data process will produce the benefits outlined above and ensure real-time accurate data and control for the entire supply chain stakeholders.

It's not too late, and, yes, the Feds are paying attention.

The Author

Dr. Giermanski is the Chairman of Powers Global Holdings, Inc. and President of Powers International, LLC, an international transportation security company. He has a Masters degree from the University of North Carolina in Charlotte, a Masters from Florida International University, and a Doctorate from the University of Miami. He is a graduate of Air Command and Staff College, and the Air War College. He was a former FBI special agent, OSI special agent and a Colonel in the Office of Special Investigations where he handled counterintelligence matters.



INTERVIEW

Maritime Logistics Professional *Profile*

Lisa M. Swanson

Director, Environmental Affairs
Matson Navigation Company

At Matson Navigation Company, Lisa Swanson is responsible for developing and promoting environmental initiatives in support of Matson's ISO 14001 and ABS SQE environmental management system certifications. Now, that's a mouthful, but at the same time, it is only one of her many duties. When she's not monitoring Matson's many regulatory activities, she's probably participating on a number of technical advisory groups including those convened by California State Land Commission for ballast water and biofouling. On board with Matson for 11 years, and with previous experience as an environmental consultant and E&S Manager for a variety of shore-based industries, Swanson is also a registered professional chemical engineer. She's also, apparently, on the waterfront to stay.

Lisa Swanson's place in the supply chain is an important one – especially for Matson. That's because Matson's environmental policy necessarily meshes with the reality of day-to-day logistics. At a time when simply professing to be 'green' isn't good enough, it is also important to view the environmental impact of any intermodal activity as a necessary part of doing business. It can also be a policy that turns one kind of green into another. And, while that's not necessarily what Matson's Environmental Affairs Director is focused on, it most certainly has been a welcome byproduct.

Swanson and members of the Clean Cargo Working Group at Philly Shipyard where Matson's next two ships are being built.

Great Circle Route to Home Port

Like many professionals who find themselves on the waterfront, Swanson didn't come from a traditional 'maritime' background. But what she brings to the waterfront – at least for many maritime businesses – was sorely lacking when she dipped her toes in the briny water. For her part, Swanson explains, "It still amazes me but I actually found myself 'on the water' by applying for a Matson job opening on monster.com. At that point, I had over 20 years of experience addressing environmental issues for a variety of industries, but I didn't know the 'pointy end of a ship.' I saw ships, ocean, and Hawaii in the job description and thought, 'this is my dream job.'" Eleven years later, and she's still living the dream.

In fact, Swanson pragmatically sums up some of the reasons why, saying, "As an environmental professional, the maritime industry has certainly been the place to be for the last 11 years. So many new technology-forcing regulations have been adopted and implemented during that time, and it has been a rewarding challenge to participate in the rulemaking process and assist Matson with compliance. Ocean transportation is a fascinating industry that most of the public knows very little about, and I feel privileged to have learned so much about it; particularly getting to know the U.S. merchant mariners that go to sea for a living."

Armed with a BS in Chemical Engineering, Swanson hit the brick in 1983, when chemical engineering was already making the transition from the historic refinery and chemical plant jobs to new industries such as biotechnology and semiconductor manufacturing. Intent on a career in biotech, she switched gears

*...I saw ships, ocean, and Hawaii in the job description and thought, '**this is my dream job**.'*

Lisa M. Swanson,
Matson Navigation Company

As an environmental professional, the maritime industry has certainly been the place to be for the last 11 years. So many new technology-forcing regulations have been adopted and implemented during that time, and it has been a rewarding challenge to participate in the rulemaking process and assist Matson with compliance. Ocean transportation is a fascinating industry that most of the public knows very little about, and I feel privileged to have learned so much about it; particularly getting to know the U.S. merchant mariners that go to sea for a living.

after only two years when the EPA hazardous waste and underground storage tank regulations went into effect. She explains, "I think the reason that we're seeing 'Chem E's' in the maritime industry is likely because of our experience in environmental compliance and the application of environmental controls like scrubbers and selective catalytic reduction to the maritime industry."

Along the way, it didn't hurt that Swanson's father was an engineer and gently pushed her in that direction. "In addition to being extremely smart and having an unusual gift of making math fun, he had a very progressive attitude about girls and always made me feel that I could do anything that my brother could," she said. Later, at UC San Diego, she had a chemical engineering professor who was a mentor and gave her an opportunity to conduct independent research as an undergrad. Ultimately, he helped get Swanson her first job after graduation.

Another Kind of Green

Matson operates with a lean Safety, Quality, and Environmental Affairs department, something that requires Swanson to spend a lot of time administering SQE management systems, including conducting regular audits, implementing corrective actions, and keeping procedures up to date. Outside of her daily duties at Matson, Swanson is a member of the BSR Clean Cargo Working Group, something that bills itself as a "leading global carrier-shipper initiative dedicated to environmental performance improvement in marine container transport through measurement, evaluation, and reporting."

It all sounds good, but we asked Swanson: what does that really mean and where does it make meaningful impact? According to Swanson, the Clean Cargo Working Group was started over 10 years ago by major retailers like IKEA and Nike who were starting to evaluate the carbon footprint of bringing their products to market. She adds, "Ocean shipping is a big part of the footprint but methodology for calculating it had not yet been developed. The group now consists of shipping companies comprising over 80% of the global container shipping capacity, shippers, and freight forwarders."

Ultimately, the shipping companies submit annual performance metrics, and the group publishes publicly available emission factors for various global tradelanes that can be used to estimate carbon footprint. Matson, for its part, can now evaluate carbon efficiency on an annual basis and compare its performance with other carriers. For Swanson, it also provides a great way to stay current on environmental regulatory developments. "I love the opportunity to interact with my international colleagues in the group and visit new destinations for our twice a year meetings. My role has been to champion improvements to the methodology that reflect the particular challenges of smaller, niche carriers like Matson."

Early in her career at Matson, Swanson attended many meetings with the California Air Resources Board (CARB) during their rulemaking process. With her first opportunity to act as an advocate for her principals, Swanson and her team did their best to educate lawmakers who at the time had very little understanding of the maritime industry. Directly successful in securing an exemption for steamships which allowed Matson to use various assets until 2020, she has over time, applied for and received several environmental awards.

For the most part, Swanson believes that the industry has made significant progress over time. But, she says, there is much to be done. "I think we now have plenty of regulations and incentives programs in place to really 'green' the industry and we have made significant progress over the last 5 years or so. We now need to ensure that those regulations are fully enforced and that everyone is doing their part." Matson and Swanson, in the meantime, have moved forward and stayed ahead of the regulatory curve. This involves, says, Swanson, by moving ahead in a proactive, rather than a reactive way, where that is possible.

Settling In, Leading the Way

As a newcomer to the waterfront many years ago, Swanson faced the same challenges as most; a strange nomenclature, a professional community that, in most places, was largely comprised of white males, and the need to come up to speed quickly. Like many other women on the water, one place that she turned to for answers was the Women's International Shipping & Trading Association (WISTA). WISTA provided a place to network, a source for mentors and advice, and a voice in the industry. And, in Swanson's case, some of those connections led to working with high students and encouraging them in engineering and maritime careers. Swanson attends the SoCal chapter meetings and often hosts them at her office at Pier C, but hasn't yet assumed a leadership position.

Swanson talks about her own experiences, saying, "It is no longer uncommon to see female longshoreman and crewmembers, but they still are definitely a minority." In terms of expediting opportunities for women in the maritime industry, Swanson says that the most important thing is outreach and making them aware as to what the opportunities are. Putting action to words, she last month attended the Port of Long Beach's 6th annual Celebrating Women in Trade Luncheon. "It is a fantastic opportunity to expose young women to all the different types of careers available in the industry."

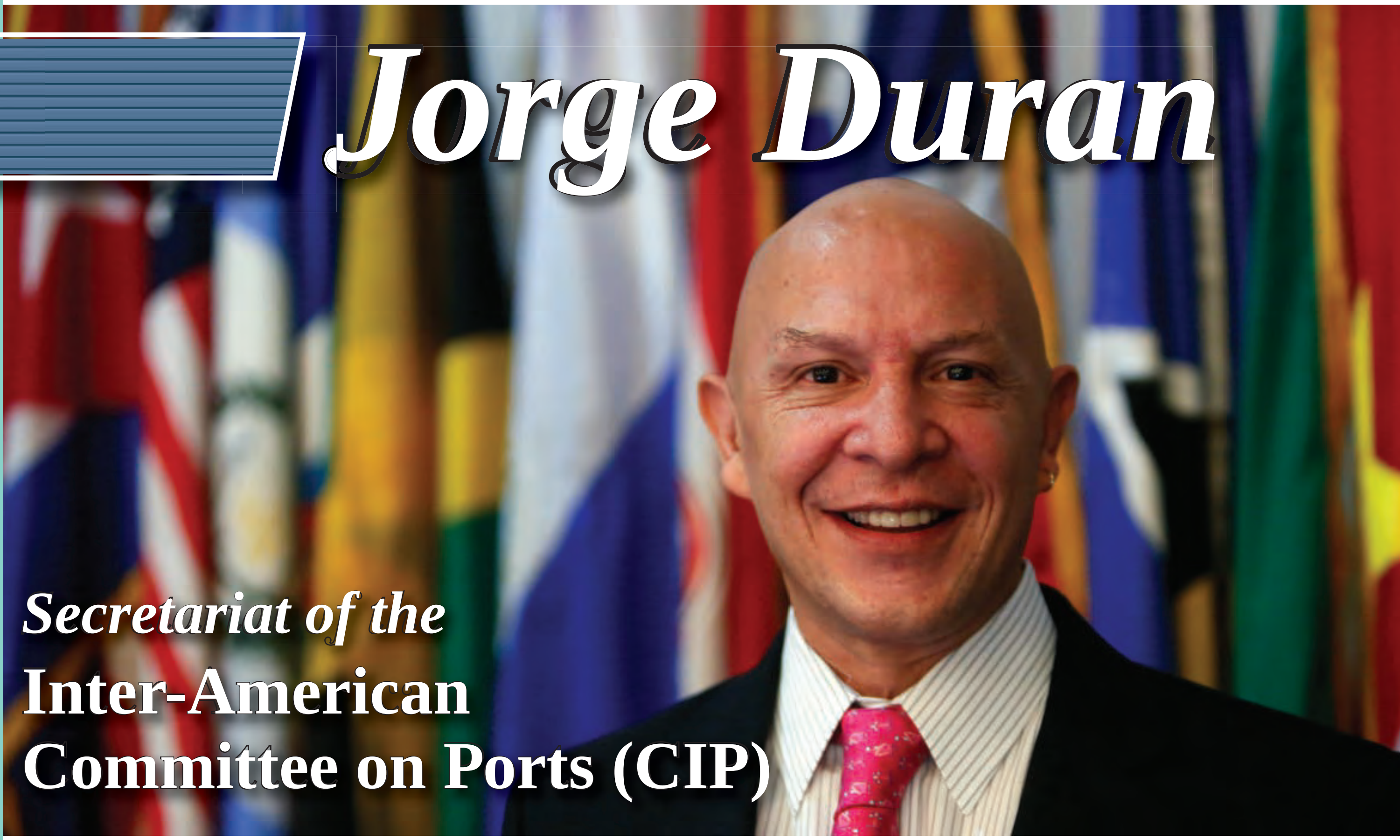
As to what she would tell other women trying to enter the maritime industry, she says, "Like everything in life, you won't get anywhere if you don't try. My career certainly would've been very different if I hadn't responded to that monster job posting. I think it is much easier to get into the industry if they go to a maritime academy. Even if they don't want a sea-going career, an academy degree is highly valued for in any maritime company."

Matson has always taken pride in being stewards of the environment, but the road to their current reputation as one of the greenest shipping firms in the supply chain hasn't always been easy. Like most shipping firms, Matson has had experienced its bumps along the way. That said; when Swanson was tasked with putting together an application for the U.S. Coast Guard's Benkert Award for Environmental Excellence – for many, the pinnacle of recognition in terms of maritime environmental excellence – it turned out that Matson had a very good story to tell. In Swanson, they also had a very good messenger. Matson won the award in 2006 and then again in 2012, in no small part thanks to Swanson's efforts in documenting the firm's compliance record.

About the effort, Swanson says simply, "On a professional level, it profoundly affected my acceptance into the Matson Ohana." We looked up the definition of 'ohana' and came upon this simple description: "Ohana: the idea that family and friends are bound together and everyone must work together and not forget each other." That sounds like Swanson, Matson and WISTA; all rolled into one neat package. If so, the waterfront is in good hands.

Swanson on board showing two of Matson's most significant green initiatives; shorepower reel and the greentainer (where all garbage except food scraps are placed). Matson had been doing this for 15 years before Marpol annex V was amended to mandate this worldwide.

Jorge Duran



Secretariat of the Inter-American Committee on Ports (CIP)

Born in Mexico City, Jorge Duran grew up in Mexico, and due to his father's diplomatic postings, subsequently spent time in London, England; Stockholm, Sweden; and Washington, DC. In 1989, Jorge earned a Bachelor's of Arts degree in Psychology with a minor in Latin American studies from American University. Following graduation, he spent two years at the Science Advisory Council to the President of Mexico and then received a full scholarship from Mexico's Science and Technology Council for a dual Master's Degree in International Affairs and Science and Technology Policy from The George Washington University in Washington, DC (1992-94).

After a brief stint at the Mexican Mission at the United Nations in New York, Jorge returned to Mexico where he embarked upon several initiatives in the private sector. For over 25 years, Jorge Duran has worked with the governments and private sector of the Americas in the design and implementation of development projects in Latin America and the Caribbean. Since 2003 Mr. Duran has served at the Organization of American States (OAS) as Senior Advisor in Technology for Development, Senior Manager for Municipal Development and Capacity Building, in 2012 as Chief of the Office of Science, Technology and Innovation and, since 2013, as Chief of the Secretariat of the Inter-American Committee on Ports (S/CIP).

He has been responsible for projects such as entrepreneurship strategies for MSMEs, innovation for competitiveness, micro business promotion through ICTs; on-line training; municipal development in e-government and cadastre; scientific journalism, university curricular improvement, maritime and port environmental protection programs and improved supply chain management logistics for increased competitiveness. Additionally, Mr. Duran has a proven record of establishing successful strategic alliances with the private sector.

Significantly, he reactivated a high level political dialogue and Port Authorities of the countries in the Americas have become much more active in collaborative activities. Finally, CIP is working to implement with Associate Member Right-Ship from Australia a greenhouse gas reduction programs for cargo ships while in port in Barbados, Mexico, and Colombia. In this edition of ***Maritime Logistics Professional***, he weighs in on CIP's impact on ports, the supply chain, the environment and global trade.

How would you describe your management philosophy?

My management philosophy is one that is high-energy and results oriented, based on trust and constant, fluid communication among teams. I have been fortunate enough to be sur-

rounded by fantastic people that make up the CIP Secretariat. I trust my staff and colleagues and encourage them to perform their duties, to the best of their abilities, each and every day. I encourage everyone to be copied on all emails, even if they are not involved in a particular project. This promotes a team-focused environment and a way for all team members to be familiar with the day-to-day functions of the office, even if they are not directly responsible for the task. While those directly involved are looking at the tree, those who are not can look at the forest. In fact, it is those who are not directly involved who can use fresh eyes to identify different perspectives, offer feedback, and identify areas needing improvement. I am invested in my staff's personal and professional development. I find that this strengthens personal relationships, encourages camaraderie and communication, and builds trust, which strengthens the team. I enjoy the aspects of my position as it is both rewarding and challenging as I work with governments and private sector organizations, promoting cooperation on a day-to-day basis. This requires constant building of relationships through positive, ongoing communication, hard work, and trust. We have developed and continue to cultivate relationships with Port Authorities, Associate Members, and Diplomatic Missions at the OAS.

Please describe OAS, and your division's role in OAS.

The OAS is the premier political organization of the Western Hemisphere, akin to a United Nations for the Americas. The OAS has four pillars: Human Rights, Multidimensional Security, Political Affairs, and Integral Development. The CIP is located under the Executive Secretariat for Integral Development, and we are charged with promoting the development of a competitive, secure, and sustainable port sector. The CIP's six priority areas are: 1.) Port Competitiveness and Logistics; 2.) Port Security and Protection; 3.) Port Legislation and Policy; 4.) Sustainable Port Management and Environmental Protection; 5.) Inland Ports and Waterways; and 6.) Corporate Social Responsibility and Gender Equality. In these six priority areas, the CIP Secretariat promotes political dialogue at the highest level, training opportunities and capacity- building, project implementation and technical assistance and collaboration with the private sector. We achieve our objectives through cooperation and collaboration among public and private actors.

You interact directly with ports and port facilities in the Americas, but specifically, what is your 'audience' of the OAS membership?

First and foremost, the CIP's Members are the National Port

> *Larger, newer ships require state-of-the-art port facilities, and the Port of Cartagena in Colombia and the Port of Kingston in Jamaica, for example, who see themselves as regional transshipment hubs, are investing heavily in modernized infrastructure to expand operations by accommodating larger ships and, in theory, larger volumes of trade.*

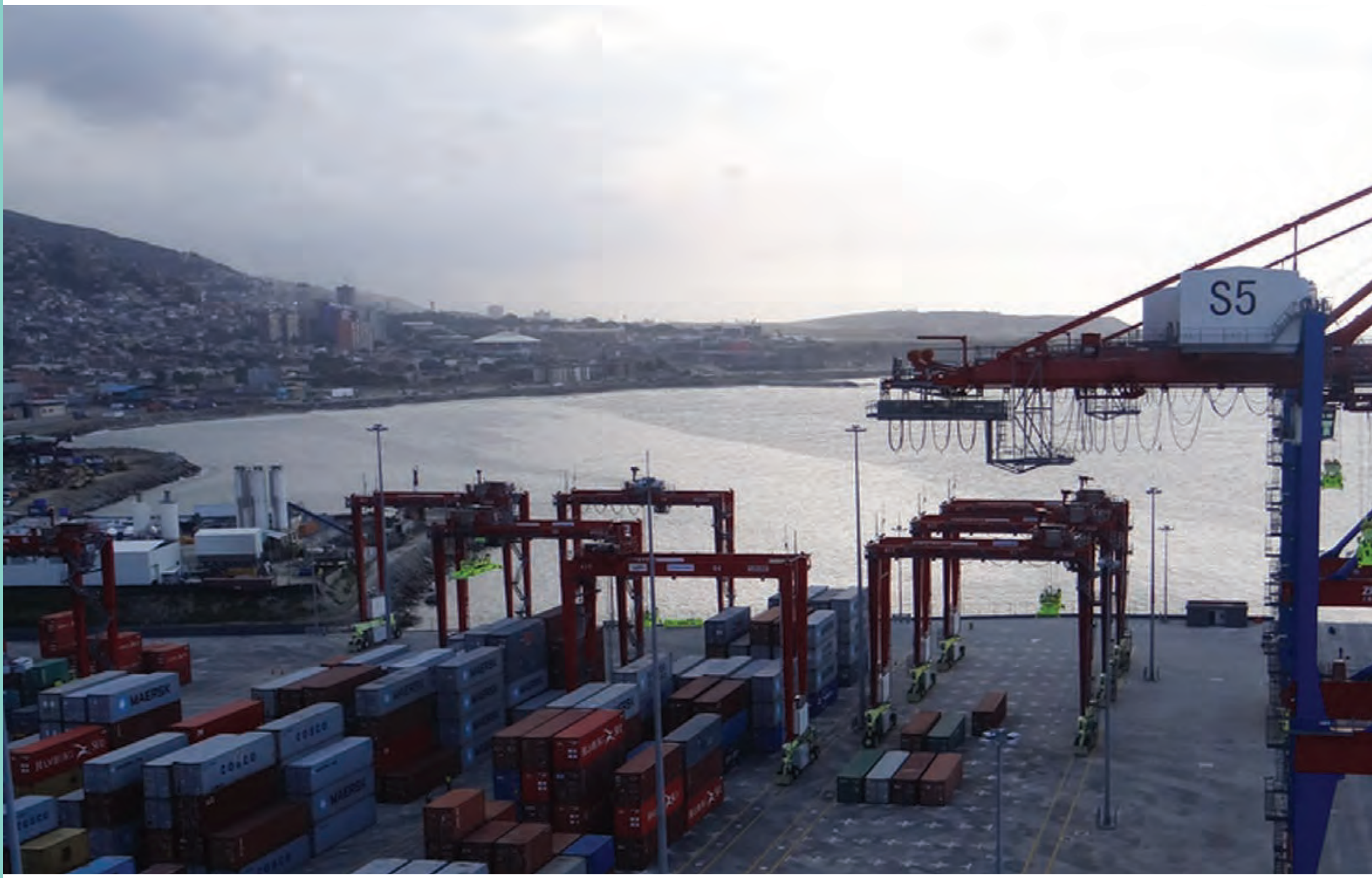
Authorities of the 35 sovereign nations of the Americas (with the exception of Cuba). All countries in the Hemisphere except for the United States and Canada have a Federal Port Agency that, in one way or another, may be responsible for regulation, enforcement, planning, development, and/or granting concessions to private-sector firms to manage the port and/or terminals. Although these agencies may differ by name, they are the ranking port and maritime public agency in a particular country usually at the vice ministerial level. The United States is well represented in the CIP through the U.S. Department of Transportation's Maritime Administration and we also have a productive relationship with the U.S. Coast Guard. In addition, we welcome and encourage the participation of Associate Members, which are private firms, corporations, associations, other international organizations, Ministers of Transport, Port CEOs, Port Security Managers, and maritime service companies, among others.

Port Logistics are obviously crucial to world and regional trade, and the economies of sovereign nations. What do you consider to be the biggest impact to facilitating efficient trade, and why?

When looking at Latin America, on one hand an important element is to improve port infrastructure. On the other hand,

Photo: Ministry of transport of Colombia, www.mintransporte.gov.com

there is a need for legislation updates and modernization. The imminent Trade Facilitation Agreement (TFA) makes it essential for improved inter-agency coordination, particularly among customs agencies and port authorities. Another important element is technology. Though several of the region's countries have single-window systems for import and export activities, this is not available in all of the region's countries; however it is critical for improving trade. It is important to note that the single most important element to facilitate trade is improved logistics and more efficient multi-modal transportation of goods to the hinterland and to neighboring countries. Although many Latin American countries no longer are bound



by significant quotas or tariffs, their logistical and transportation costs hinder effective trade within the region and with other parts of the world.

Looking at regional ports and port facilities, what are the top challenges that they face in building and maintaining efficient operations?

One of the main challenges the region's ports face is having the necessary and adequate infrastructure to compete in the modern global arena. With the expanded Panama Canal now in operation and larger vessels now traversing Caribbean and Central American waters, ports around Latin America and the Caribbean are poised to reap benefits from these changes in global shipping patterns. Larger, newer ships require state-of-the-art port facilities, and the Port of Cartagena in Colombia and the Port of Kingston in Jamaica, for example, who see themselves as regional transshipment hubs, are investing heavily in modernized infrastructure to expand operations by accommodating larger ships and, in theory, larger volumes of trade. These two ports are not alone. Mexico is investing US $3.6 billion in 25 port infrastructure projects on the Pacific and Gulf/Atlantic coasts to handle over 500 million tons of cargo per year and become a logistical platform for value-added activities in the region. It is important to mention that more than 70 percent of this investment comes from the private sector, which has become a partner for development in most Latin American countries.

Part of this challenge is that as ports in the region grow and aim to become more efficient, they must consider the intermodal connectivity required for their countries to benefit from improved port efficiency. It would not do anybody any good to receive the larger ships and unload them very efficiently if the cargo is going to sit at the port for a week. Thus, countries will need to overcome the intermodal transportation connectivity challenge. Colombia, for instance, is dredging and investing in port infrastructure on the Magdalena River, which crosses the country from north to south and provides access from both Cartagena and Barranquilla to the hinterland. Argentina and Uruguay are already using the Paraguay and Paraná rivers to carry products to their hinterlands as well as to Asunción in Paraguay and even Bolivia and Brazil. Mexico, lacking the necessary waterways, has invested in three inter-oceanic road and rail corridors, including dry ports midway to reroute cargo, which connect 20 shipping lines to 133 countries.

Finally, as these ports move ahead with investments and modernization projects, they must take environmental protection and sustainable port operations into consideration. Today, shipping firms and cruise lines give considerable weight to being able to call on a 'green port.' For instance, Mr. Hector Bautista, Director General for the Port of Ensenada, Mexico, mentioned that after being certified as 'green' by EcoPorts, Ensenada began to receive more cruise and containership calls. In addition to Ensenada, there are only two Latin American Ports certified by Eco Ports: Lazaro Cardenas on the Mexican Pacific Coast and Santa Marta in Colombia. The region's ports are well aware of the challenges involved in complying with MARPOL and other international regulations and standards, but they are also well aware of the benefits of being considered a 'green port.'

HAPPY HOLIDAYS FROM HANJIN

BARRY PARKER DISSECTS ONE THE MOST DISRUPTIVE EVENTS EVER TO IMPACT THE INTERMODAL SUPPLY CHAIN. THERE IS MORE PAIN TO COME, LESSONS TO BE LEARNED – AND CORRECTIONS APPLIED.

BY BARRY PARKER

The Hanjin Shipping debacle, brewing over time and seeing a full blown eruption in late August, is still ongoing. The company voluntarily opted to enter 'receivership,' followed by a Chapter 15 bankruptcy filing in the States, shortly after the initial bombshell. The move provided a template for Hanjin vessels to dock, and cargo to be discharged. By late October, most (but not all) stranded cargo had been unloaded; chartered-in ships had gone back to their owners, and Hanjin was seeking to raise money by selling off discrete portions of its business. As the drama unfolded, the Port of Long Beach (where Hanjin was historically a major player) showed September 2016 volumes down by 16.6% from the comparable 2015 figure. But, that's only one part of the sordid story.

Underwater, Dragged down by Debt

By the numbers, Hanjin was severely overleveraged at a time that container shipping's slump had also continued to deepen. Analysts at AlphaLiner, a specialist in the container trades, offered, "The company is the seventh largest liner in the world, with 98 vessels totaling 609,500 teu as well as 44 bulkers and tankers. It charters in 61 ships." Drewry Shipping, an independent consultant with finance expertise, weighed in and said, "The debt burden was just staggering and it doesn't surprise us that [lead creditor] Korea Development Bank effectively decided to pull the plug. As of end 2Q16, Hanjin had a total debt of $4.2 bn and net gearing ratio of 8.7x, and cash at hand being $156.5m."

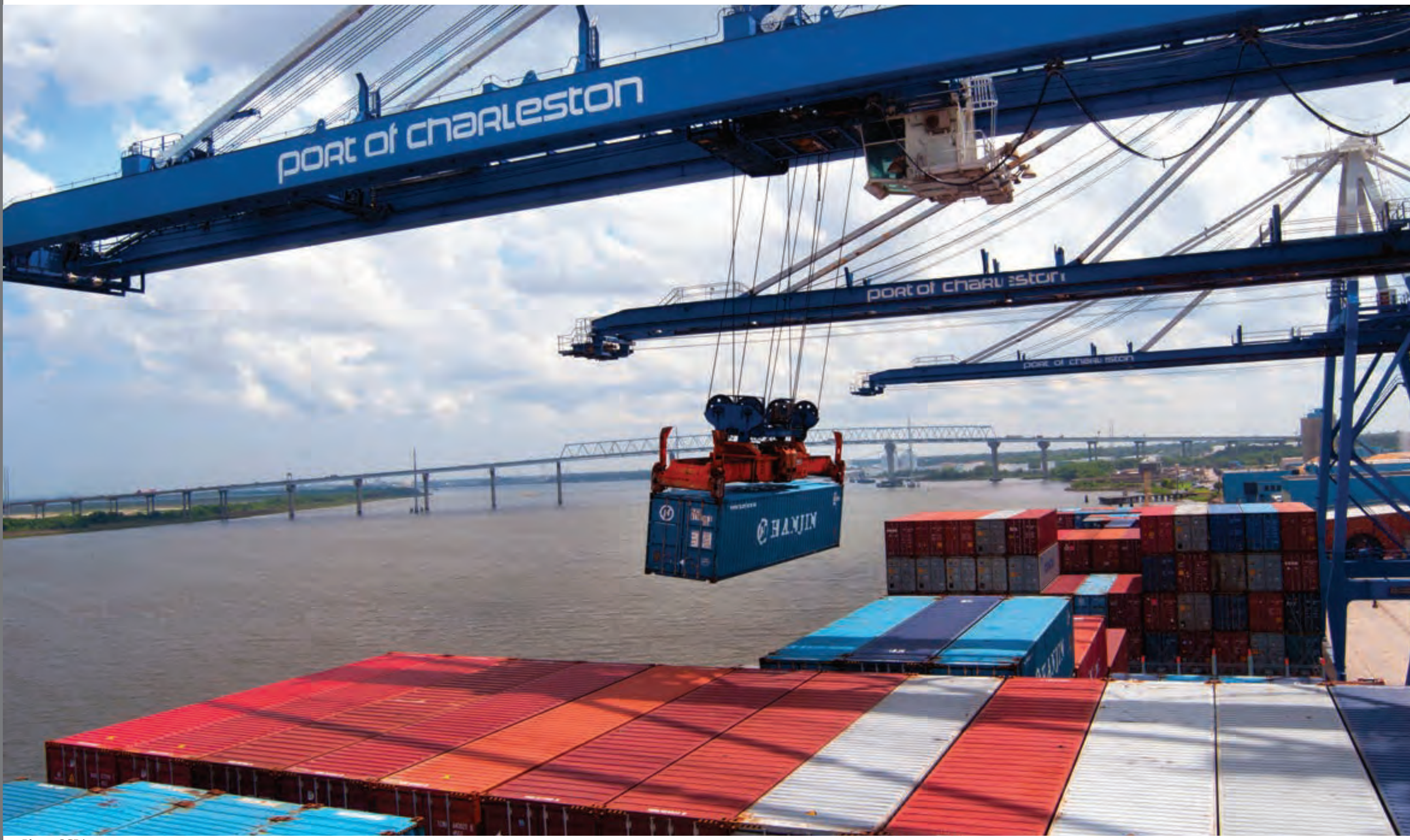


Photo: SCPA

IT IS TIME FOR ALL OF THE STAKEHOLDERS TO TAKE A HARD LOOK AT THEIR PARTNERS WITHIN THESE SHIPPING ALLIANCES. AND, WHEN THERE IS TROUBLE, THE PARTNERS SHOULD STEP IN TO HELP.

– William Doyle, U.S. FMC Commissioner

By many accounts, Hanjin was beyond the point of being saved. For example, VesselsValue, the sister firm of a London (UK) based shipbroker, said that Hanjin's owned vessels were worth approximately $1.7 billion. As its implosion began, its debt to asset ratio (which considers its 37 owned vessels) of 250% was 3-½ times the 70% considered to be "aggressive" by ship finance experts. Those multi-billion dollar financial parameters nevertheless pale in comparison to the numbers surrounding the implications of Hanjin's collapse on cargo supply chains. Hanjin was moving just under 8% of trans-Pacific trade from Asia into the U.S. and 10% of the flows from Asia into Europe. And, the WSJ estimated that Hanjin was handling 3% of the global box trade.

Many industry participants were surprised when Hanjin threw in the towel, but some were not. Matthew Kobussen, Director- Global Logistics at Baltimore-based Customs Broker and NVOCC Samuel Shapiro & Company, talked about reading the tea leaves in the months preceding the collapse, telling ***Maritime Logistics Professional***, "In July and August, Hanjin was very aggressive in trying to get share – they were chasing the market very hard. Clearly, some companies gambled and lost."

Terrible Timing:

As the crisis unfolded, the most immediate problems concerned the disposition of cargo aboard Hanjin vessels, and vendors owed money at the time of the filing. Analysts estimated that as many as 500,000 containers were stranded aboard Hanjin vessels, with cargo belonging to an estimated 8,300 consignees worth $14 billion. According to Samuel Shapiro's Kobussen, South Korean companies LG and Samsung had 'major' exposure, adding, "The Chapter 15 filing definitely helped speed things along; we are looking at delays of several weeks – maybe a month, but not months and months. There are still vessels on the water; for these, there may be delays of two months," he said in October.

The timing of Hanjin's descent could not have been worse, coming during the peak season as retailers stretch supply chains, building up inventories for the end of year shopping rush. Clifford Adler, President of Kurt S. Adler Co., a high volume importer of Holiday season decorations and ornaments, told ***Maritime Logistics Professional***, "This is a bad situation because Christmas will not wait for these containers and some of our customers may cancel some of their orders. We didn't even have a contract with Hanjin, but got stuck on these ships through a vessel sharing agreement that Yang Ming (with which we do have an agreement) has with Hanjin."

Ultimately, Adler's first vessel arrived on October 13th, a month later than its original ETA. The containers were eventually off-loaded, but a final vessel, scheduled to arrive in late October, had already been arrested three times and its status was still unknown as this magazine went to press.

Enter the Attorneys

Predictably, Hanjin assets, all over the globe, were afforded little respite from the storm. In Vancouver, BC maritime lawyer Shelley Chapelski of Bull, Housser & Tupper told Maritime Logistics Professional, "The Hanjin Scarlet and the Hanjin Vienna were arrested in Canadian waters, at Prince Rupert and Vancouver respectively, in early September. The Vienna was arrested by our firm on behalf of ship docking company. We also act for other creditors against both vessels. After the initial arrest of each vessel by a creditor, various other creditors have filed 'Caveat Releases' which means that the ship cannot be released from arrest without giving that creditor the opportunity to obtain security for its claim. In effect, each has been arrested by multiple creditors."

Echoing the time frames described by Kobussen and Ludwig, Chapelski also reported that, nearly two months after the original vessel arrest, "Hanjin Shipping has just applied to the Federal Court of Canada to move the Scarlet, while it was under arrest, from Prince Rupert to a discharge terminal in Vancouver with the intention of discharging all of the containers and taking on necessaries. After doing so, it will return to an anchorage in BC. Assuming that the order is granted, the vessel will sail to Vancouver to discharge." She added, "We do not know yet if Hanjin will make the same proposal to discharge the Vienna which is owned by German interests." The lengthy time-frames were surprising. Chapelski added, "We have been surprised how long it has taken Hanjin and the insolvency managers to deal with the ships under arrest in

THE FALLIBILITIES OF SHIPPING, WHICH HAS BECOME AN INVISIBLE DRIVER OF OUR ECONOMIES, IS SURPRISING MANY MERCHANTS WHO HAVE COME TO ASSUME THAT PHYSICAL DELIVERY SYSTEMS WORKS AS SEAMLESSLY AS THE INTERNET APPEARS TO OPERATE.

– Shelley Chapelski of Bull, Housser & Tupper

Canada. Having a containership under arrest for almost two months is extraordinary in Canada."

The collapse of Hanjin spawned many other permutations; all requiring negotiation regarding payments and security. Ships were not allowed to dock, and when they did, disputes about holding 'empties' arose. Spot rates for moving containers then rose drastically in early September. Analysts at Drewry wrote that rate assessments increased by 42% to $1,674.00 (for a 40' box) on Shanghai/Los Angeles, by 19% to $2,151.00 on the Shanghai/New York, and by 39% to $1,826 on the Shanghai/Rotterdam route.

Hanjin's competitors quickly instituted new service loops. Owners of chartered ships also moved quickly. Peter Curtis, Chief Operating Officer of shipowner Seaspan Corporation (whose tough stance on renegotiating charters with Hanjin had made news throughout the summer months) told a late-October briefing of journalists in Vancouver, "…We are out of Hanjin now." Seaspan had three wholly owned 10,000 teu ships on ten year charters to Hanjin, along with four managed ships, owned by a related private-equity backed company.

Following the Fallout

By most accounts, the impact of Hanjin's collapse will extend far beyond the present legal tussles. That's because, says Robert Frezza, a Deloitte restructuring expert, speaking at the New York Maritime Forum (NYMF), the unwillingness of the Korean government (with the Korean Development Bank being Hanjin's largest debt provider) to fund a mismanaged company "…is sending a big signal to the rest of the industry." Longer term, the complexion of services and land-based assets will shift.

As Hanjin sought to raise money, the selloff of routes and terminals had already begun. Documents filed in a Korean bankruptcy court showed that Hanjin's Asia to U.S. business (including personnel) was for sale, with bids due in early November. Other filings had MSC looking at buying out Hanjin's stake in a jointly-owned terminal in Long Beach. Sales of owned vessels are also expected. All of this adds confusion to a muddled patchwork of carrier alliances where industry analysts already need a scorecard to keep the players straight.

The recent upward burst in spot slot costs notwithstanding, Gordon Downes, a liner shipping veteran and CEO of the New York Shipping Exchange (NYSHEX), sought to dispel notions of Hanjin related issues taking capacity out of the market. He told MLP: "The container shipping industry has been in decline for some time, and a market correction like this was inevitable. That said; Hanjin's bankruptcy is not going to solve the excess capacity in the industry because their vessels will eventually find their way back into service."

Separately, and in October, Seaspan Chairman Gerry Wang asked, "Will Hanjin be the Lehman Brothers event for shipping?" Howard Finkel, COSCO EVP, also speaking at NYMF, said in way of an answer, "Unless the rates come up to a decent level, you may see other companies fall." Finkel described Hanjin as a wake-up call, adding, "… We cannot continue to operate like this."

Downes approached the issue with an operational focus, insisting, "As an industry, if we want to avoid these types of disruptions in future, we have to improve the fundamentals. For instance, the lack of contract compliance is a major problem today, causing chronic booking downfalls, shipment rolling and even blanked sailings." That's because, despite the aura of supply chain optimization throughout the world of logistics, the situation in the trenches can be very sloppy. Downes, also a veteran of Maersk, continued, "Merely improving contract compliance will help carriers to better plan their service networks and investments, while helping shippers improve their supply chain reliability. This could save the industry $23 billion of economic waste each year, potentially one of the stabilizing factors our industry clearly needs."

Lessons Learned

A different look at the big picture came from Shelley Chapelski, who said, "The fallibilities of shipping, which has become an invisible driver of our economies, is surprising many merchants who have come to assume that physical delivery systems works as seamlessly as the internet appears to operate." Behind all the legalities and logistical snafus, there is also a human side, she warns, adding, "What strikes me is that creditors expressed concern to me about the effect of their actions on Hanjin's people and customers. Even if Hanjin Shipping does not survive the insolvency, its former employees and cargo customers are bound to show up again when other operations take over its liner services. The creditors did not want to burn bridges with those people and sometimes moved reluctantly to arrest the ships and protect recovery of the debts owed to them."

The aftermath, therefore, contains important lessons for cargo movers. Mr. Kobussen, in discussing the role of the NVOCC, offered, "We have an obligation to our customers; we need to make careful decisions. These can't be at the expense of our customers. It's important to do your research; due diligence and understanding the financials of the carriers is the key. We place a huge value on diversification and the ability to make adjustments on the fly." Within those decisions, a cogent strategy is critical to the final outcome, he said, continuing, "We have contracts with many carriers. We manage them and provide space to our customers. It is a volume thing, but in such situations, you need to manage all the pieces of information so that you can manage the risks."

As with any crisis, the commercial and consumer input to the solution is critical. So, too, is the regulatory angle. William Doyle, a U.S. Federal Maritime Commissioner, also weighed in and pulled no punches. "It is time for all of the stakeholders to take a hard look at their partners within these shipping alliances. And, when there is trouble, the partners should step in to help." That means, he adds, vetting who you do business with, before you engage in those contracts. Beyond this, he insists, "The marine terminals could have moved faster so that shippers could find another carrier to move their goods." Too many cargo owners were hit with horrific demurrage charges when Hanjin was unable to pick up contracted cargo, and the terminals themselves were unable or unwilling to expedite the process.

The ultimate irony of the Hanjin tragedy may well reside in the fact that, within the struggle to extricate even a single container from an arrested boxship, the end-user (consumer) has finally come face-to-face with just how important the global supply chain is to the average person. That it took something as impactful as Hanjin's collapse to do that may be symptomatic of bigger problems, as yet uncovered, within the greater supply chain.

Barry Parker of bdp1 Consulting Ltd provides strategic and tactical support, including analytics and communications, to businesses across the maritime spectrum. The company can be found online at **www.conconnect.com**

MASTER & COMMANDER

Captain Ted Bernhard

From a boy who wanted to be a swashbuckler like Errol Flynn to a Maine Maritime graduate to hopping aboard a grain ship bound for Egypt, Captain Theodore "Ted" Bernhard has led a quintessential maritime life. A ship driver with 37 years of maritime experience, Bernhard has spent half of his adult life at sea, the last 20 years on containerships with Matson, the ubiquitous U.S. commercial maritime presence in the Pacific Ocean. Life at sea in 1979 – with no cell phones, no internet and no email – was fairly different than it is today, but was it better? Was it worse? To find out, ***Maritime Logistics Professional*** *spent an afternoon with Captain Bernhard to discuss the ever-evolving life of a U.S. Jones Act fleet mariner.*

By Greg Trauthwein

Graduating Maine Maritime in 1979 with a degree in Nautical Science and a minor in Ocean Engineering, Ted Bernhard was similar to most 22 year olds: in need of direction. "When I graduated I was at a crossroads; originally I was planning to join the Coast Guard," said Bernhard. "But then, Ken Biebel, my college roommate and best friend to this day, called me and we ended up going on a grain ship to Egypt. I joined the union, took that grain ship to Egypt and I have stayed with maritime ever since."

While every mariner's career story is unique, the trajectory of Bernhard's path is perhaps familiar to that of many of his contemporaries: the '70s to the '90s were more youthful and carefree, while the mid-90s to today are more structured and time-conscious. Father Time is not the sole culprit in this transformation, as the maritime industry itself, driven by consolidation and corporatization, driven by increased levels of regulation and legal liability, driven by technology that has seen the ship become a 24/7/365 monitored piece of an overall logistics puzzle, have changed the industry to its core.

"It was tough shipping in those first 10 years because it was a story of too few ships and too few jobs," said Bernhard. "But it was also a free style of living; I was single, I was traveling the world and I was living in different countries." By late 1980s, though, he tired of sailing as a junior officer, and was presented some opportunities that served as a launching pad for his career. But things started to change when his APL ship was bought by Matson. "That turned my whole life around," said Bernhard.

The Matson Way

Founded in 1882, Matson is a familiar maritime company, the leading U.S. carrier in the Pacific providing a lifeline to the economies of Hawaii, Alaska, Guam, Micronesia and select South Pacific islands. Its fleet of ships includes containerships, combination container and roll-on/roll-off (ConRo) ships and custom-designed barges. Matson Logistics was established in 1987 and extends the geographic reach of Matson's transportation network throughout the continental U.S.

"It always had that family feel to it. I love it," said Bernhard. "It is still the best of the companies out there, and everybody knows it: we have good contracts, we have good relationships with the unions; and in general, it is the best run, the best thought of company with some pretty cool shipping runs."

While The Jones Act is a perpetual political football (and not the focus of this feature), for mariners like Bernhard it has proved an essential ingredient to a healthy career. "The Jones Act is not even leveling the field, it simply makes it possible to go back and forth between our own states so that a foreign operator simply can't come along and muscle us out, undercutting on price, safety and security," he said. "When I graduated from school there might have been 1,000 total ships, including MSC; now there are just more than 100."

Matson has been a steady hand in the U.S. maritime puzzle for generations, most recently announcing a $511 million order to buy a pair of new ships from General Dynamics NASSCO, a wholly owned subsidiary of General Dynamics (NYSE: GD), to build two new ConRo vessels for its Hawaii fleet at a contract price of $511 million for both vessels with deliveries scheduled for the end of 2019 and mid-year 2020.

The new Kanaloa Class honors the ocean deity revered in the native Hawaiian culture and the company will name each of the new vessels after predecessor ships from its 134-year history. The first vessel will be named Lurline, the sixth Matson vessel to carry that name, while the second vessel will be its fifth named Matsonia. The Kanaloa Class vessels will be built on a 3,500 TEU vessel platform, measuring 265 x 34.9m, with a deep draft of 11.5m and enclosed garage space for up to 800 vehicles. Central to the Matson way, the new vessels will have green technology features: a fuel efficient hull design; environmentally safe double hull fuel tanks; a fresh water ballast systems; and dual-fuel engines, able to operate up to 23 knots on either conventional fuel or LNG (with adaptation).

According to the company, the larger capacity of the Aloha Class and Kanaloa Class vessels will allow Matson to return to a nine-ship fleet deployment in Hawaii, increasing efficiency and lowering operating costs.

At a Glance: Captain Bernhard's Ship for the last 15 years

Name: Mahi Mahi	Built: 1982	Speed: 23 knots
Type: C9 Containership	TEU: 3,300	Built: Pascagoula

For the last 15 years I have been the master on this one ship, the Mahi Mahi, a C9 containership built in 1982. The C9 is built stout, and at 3300 TEU it is a medium to small containership by today's standard. But it does 23 knots and we are the perfect ship for Matson and for Hawaii. We are now going into our fourth decade and we are still a highly viable ship, primarily because of the Jones Act ...

This ship has pretty much run continuously since 1982 without a break. It's kind of amazing if you think about it.

A Life at Sea: ***Operations***

"We're definitely seeing a lack of new people coming into the industry," said Bernhard. "Even though they graduated from the academies, you don't see them coming through the unions, you don't see them going out to sea. They are finding jobs that are in parallel with the seagoing industry, something that very few people thought about (when he came out)."

Captain Ted Bernhard is a Master Mariner, sailing with Matson for 20 years, three years as chief mate and 17 as master. In addition he has spent more than 30 years in the Naval Reserve, and taught ship handling at the Naval War College in Newport, R.I., during the last 12 years of his reserve service. He sees a looming gap in maritime talent coming to the fore, as the push button/joystick generation is perhaps not as interested or adept in dealing with the ups and downs of a life at sea. He views new technology as a mixed blessing: new technology has had a tremendous effect on making shipboard operations easier in some regards, but it has come with an erosion of basic seamanship skills, a sentiment that is increasingly common in maritime circles.

"The young people that do want to come out to sea are technically capable," said Bernhard. "They are not technophobes, but on the other hand I find that they trust technology too much. So you get people that are technologically advanced and superior to my generation, but they are also technologically handicapped in a way."

"If someone pulls the plug on all of this stuff, how are we going to get from Oakland to Honolulu? Are we just going to hope we get there? What happens if all the electronic aids fail? Do you even know how to adapt and resume your voyage with centuries old navigation skills? Do you know how to take an azimuth, sun line, & stars? Do you even have paper charts and the nautical tables to work out the solutions?" Bernhard asks rhetorically. "Somebody's going to pull the plug some day. It could be a terrorist act, it could be a military operation; it could be blanking someone out in a time of need. When that

The maritime industry worldwide faces a looming generation gap and seafarer shortage. Balancing a life at sea and family needs shoreside is a delicate act, one that Captain Bernhard has accomplished successfully with the support of his wife Franziska and daughter Charlotte.

happens, what are you going to do; just throw your arms up in the air and say 'we're lost?' Personally, I want to get home."

Of course the ultimate application of advanced technology bandied about in technical conferences is in regards to unmanned ships, with several field tests underway and predictions that unmanned commercial vessel operations could start on certain point-to-point routes in as little as five years. The notion of unmanned ships fits more broadly into the commoditization of logistics operations globally, as land-based entities test the prospects of delivery via drone, and engineers at Google and Uber, among others, test the notion of driverless cars. When it comes to autonomy on the waterfront, Bernhard is succinct: "I say go for it if you think you can prove it. But inevitably something will go wrong, and it's going to be catastrophic. You're always going to need some people on board. There might be a trend toward a homogenous fleet and homogenous operations, but every captain and ship will continue to have its own style."

Today's captain has challenges that our predecessors likely couldn't imagine. Technology advancements, the pure size and speed, immediate communications, reduced crews and the subsequent expanded roles are enough to make most of us look back longing for that slower paced, simpler time. Captains/Masters, roles are as timeless as sea travel, but this new age has made everything happen at a vastly quicker pace. Like any increase in speed, there is an exponential increase in risks, and the instantaneous worldwide coverage of even minor mishaps.

A Life at Sea: ***Amenities***

Advances in technology are certainly not limited to maritime operations, as crew amenities continues to be a prominent topic from management to seafarers alike. The previous generation's life at sea was essentially unplugged from routine communications for weeks at a time, and many of the colorful anecdotes told today were in fact oftentimes difficult.

"I remember phone calls during the first Gulf war (in the early 1990s) where you would get off the ship in Fujirah and there would be one phone booth on the dock with a line of 40

sailors long waiting to use it. It was 120 degrees and mosquitoes everywhere. Then you'd get to the phone booth, you'd make your call and there'd be nobody home, so you'd get bumped to the end of the line," Bernhard remembers. "You lived for that phone call, and that was it for the next three weeks. Well, that has all changed today. If you need to, you can make a call at any time."

Bernhard in fact says that communications from ship to shore is likely the single biggest change in seafaring life today, as with phone calls, email and internet, constant connection is available, and indeed necessary in order to attract and retain the younger generation to a life at sea. But similar to the technology driving marine operations, the advantages of enhanced amenities at sea is not always black and white.

"On my old ships we had a library and a lounge with a dozen books that the seafarer's institute would donate, and maybe a few magazines from 20 years ago. If you were lucky that was your 'library'. For big events like the Super Bowl we had 'Voice of America' and 'Radio Moscow' to listen in. That has all changed tremendously," said Bernhard. "Today we have a full library that we made ourselves; I have a full gym, we have a media and movie room; we have email that we run daily, we get satellite TV and satellite radio on the coasts."

But while the comfort level on board has improved dramatically, Bernhard senses a loss of camaraderie along the away. "It used to be four guys in a room, now it's everyone in their own room, with their own head. We used to have one message a month from the office. Now you're getting 100 emails a day. It's great to have satellite TV, but if the TV goes out the guys complain because they don't have 2,000 movies at their fingertips. That's the kind of rumblings you start to hear."

Gone too are the freedom of port calls, of spending days, weeks and maybe even a month in port, particularly in the container shipping sector where calls are measured in hours, not days. "With Matson we usually still get an overnight, which is pretty good for a container company, but it's gotten so squeezed (time-wise) that there is not much of a life outside of the ship. In some ways that's a good thing, because while some of the stories sound interesting in retrospect, they were painful during the process."

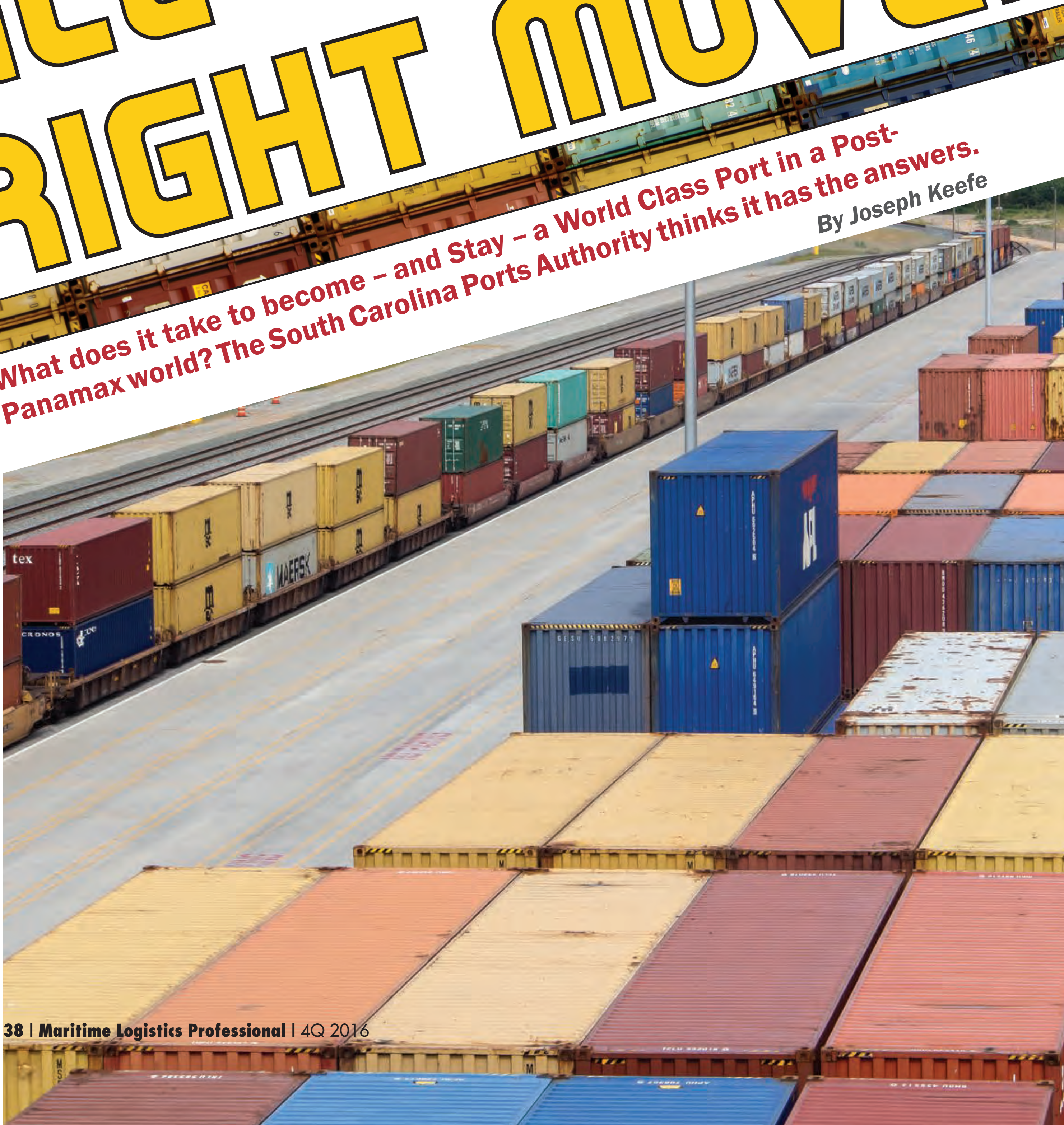
"I love my job; but some of the fun part is getting squeezed out by legal regulations and oversight that is immediate and swiftly dealt," said Bernhard. "There's not as many of the traditional swashbuckling stories left out there, or just different types of adventures. You have to be 'Cool Hand Luke' with everything, but then look what happened to Luke in the end."

Special thanks to Christian Rothenberger (left) and Heinz Wanzenried (right), Captain Bernhard's father-in-law. The pair are pictured donning survival suits onboard MahiMahi.

ALL THE RIGHT MOVES

What does it take to become – and Stay – a World Class Port in a Post-Panamax world? The South Carolina Ports Authority thinks it has the answers.

By Joseph Keefe



Credit: SC Ports

In late October, the South Carolina Ports Authority (SCPA) reported year-over-year growth during the first quarter of its 2017 fiscal year. Those numbers; bolstered by loaded container volumes, particularly on the import side, supported SCPA's growth. Strong volumes on the breakbulk side of the business and record throughput at SCPA's Inland Port at Greer, SC, provided a solid start to FY2017. And, where some ports – in particular on the U.S. West Coast – are seeing impacts from the slowing Asian economy and a nasty hangover from the Hanjin collapse, a diversified and meticulously planned strategy at the U.S. Southeast's deepest and 4th largest East Coast port is yielding fruit.

South Carolina Ports Authority (SCPA) owns and operates public seaport facilities in Charleston, Georgetown and an inland port in Greer. A second inland port, located in Dillon, SC, has been planned, approved and ground broken on its construction. In 2015 SCPA handled international commerce valued at more than $74 billion while receiving no direct taxpayer subsidy. According to SCPA itself, the port(s) represent a robust economic development engine for the state. To that end, port operations facilitate almost 190,000 statewide jobs and generate nearly $53 billion annual economic activity. The port itself employs about 500 people directly, impacting as many as 10,000 jobs locally in the greater Charleston area.

SCPA: on the move

Automobile and truck tires are among the top commodities moving through the Port of Charleston. In 2015 alone, as many as 45,442 containers of tires were imported to Charleston, the second-largest import category behind automobile parts. Tires were also the Number six export commodity, with 26,752 cargo containers sent to foreign markets. That success largely hinges upon a close relationship between the port and Michelin, a tire firm that has moved ahead aggressively to expand local capabilities.

Michelin North America's decision to move ahead with plans to build a $270 million distribution center near Spartanburg was influenced in no small part by its need to efficiently leverage the supply chain for its many products. Moving tires to retailers regionally and between the Port of Charleston and the inland port in Greer, Michelin will take advantage of SCPA's long range plans to modernize an intermodal package that the port envisions will be second-to-none on this coast, once completed.

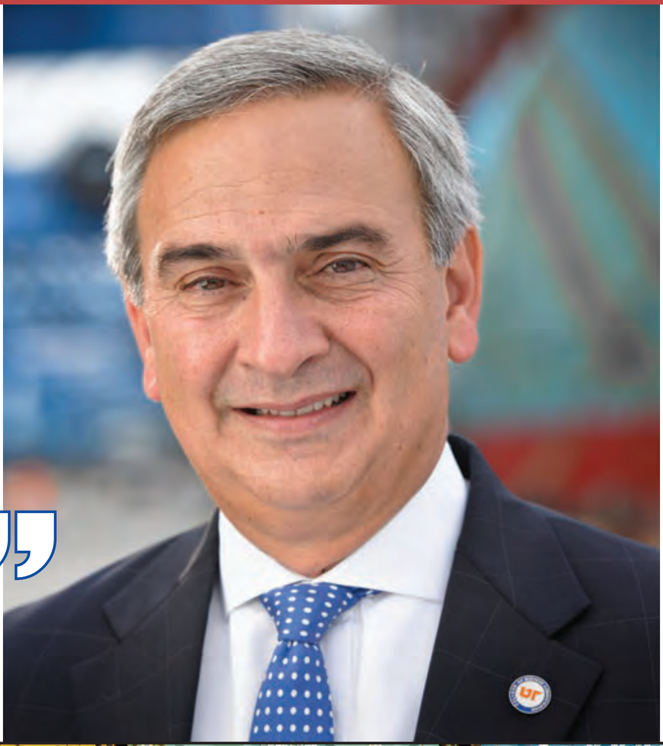
Separately, and as this edition went to press, the American Association of Port Authorities (AAPA), the self-described voice of seaports in the Americas, was focusing on key priori-

Charleston Port
Numbers that Matter ...

- 53 billion: Dollars in annual statewide economic impact
- 2 Billion: Dollars in infrastructure investments over 10 years
- 1.12 million: Handled containers in 2015
- 1 million: Tons of non-containerized cargo moved in 2015
- 2,066: Total vessel calls last year.
- 29: Days from Shanghai to Memphis (via SCPA)
- 23: Minutes for an Average Truck Turn
- 19 of 20: Top Container Lines call at Charleston
- 16: Weekly calls by Post-Panamax vessels
- 1: Days to ship from Vessel to Inland Port Greer

> The container companies are in a tough situation. They exist in a low rate environment for whatever reason – overcapacity, too many companies in the industry – we'll see how that shakes out. The industry is consolidating. When that happens, it will create a more logical industry structure. And hopefully, that will lead to success in achieving better freight rates.

Jim Newsome,
SCPA President and CEO



ties for the 2016 Water Resources Development Act (WRDA) in advance of final language being worked out by a House-Senate conference committee. And, because SCPA is intent on significantly deepening navigation channels in its quest to position itself as the East coast choice for ever-larger so-called 'post-Panamax' vessels, the outcome of those negotiations is very much on the mind of James I. (Jim) Newsome, III, President and CEO of the South Carolina Ports Authority.

Newsome told Maritime Logistics Professional in October, "We need the WRDA bill to be reconciled; we need it to go to conference committee, and hopefully, that will be done in the lame duck session. From there, we'll move into the next phase, which is pre-construction engineering design or PED. And then, we move into construction and hopefully, we're into construction in the fall of next year." In a nutshell, Newsome and SCPA hope to deepen the Charleston harbor from 45 to 52 feet by the end of this decade, and in the process, provide 24-hour access to the outer harbor without tidal restrictions. The project will make Charleston the deepest on the East Coast.

Concurrent with that ambitious undertaking, SCPA is at the same time embarking on another equally challenging improvement, this time involving a second inland port intended to duplicate the success of SCPA's first such facility, now producing real dividends in Greer, SC. The inland port at Greer – near Greenville – was opened on the premise of handling BMW manufacturing output, getting that cargo off the trucks and onto rail. Newsome explains, "We partnered with Norfolk Southern on that and we built and opened that inland port in November of 2012. And, I'm pleased to say that in that time, it handled 100,000 rail lifts. I think it is safe to say that it is the largest of port-owned inland ports today. It's given us the confidence to open a second inland port in Dillon, SC."

The Dillon inland port will be on the CSX line. Newsome adds, "You've got to be on a main rail line to make this thing work. It's a good way of diversifying our cargo moves and growing our inland infrastructure. When I joined the port in 2009, we moved 12 percent of our traffic – and on a much lower volume – by intermodal container rail. Today, we move about 25% by intermodal rail. That's a really big deal for us. So, that moves about 100,000 trucks off of I-26 every year – or 250 trucks per day. And, rail is more environmentally efficient in terms of moving freight domestically. We see an application for coastal barging as well."

If all of that wasn't enough, the port is also in the process of building a third terminal in the old Navy yard. The Leatherman Terminal, when it opens in 2020, will add a whopping 50 percent (from 2.8 million to 4.2 million TEU) to SCPA's already impressive container capacity. Currently the only permitted container terminal under construction on the East Coast, the facility is subject to a permitting process and the conditions that emanate from that effort. Newsome explains, "Access to the terminal – in this case from I-26 – is very important. That's being built now and there's going to be an intermodal container transfer facility. So, yes, the infrastructure is being put into place to make sure that the terminal is able to make the best use of its capabilities."

Separately, a Terminal Modernization project involves $600 million in spending to strengthen and modernize terminals, including structural improvements and new container cranes to accommodate still larger tonnage. Those new cranes – two of which are already in place – increase the reach of the port's box handling capabilities from 115' to 155', just in time to handle the growing volume of post-Panamax vessels.

Hat Trick: Leadership, Experience (and Vision)

Jim Newsome became just the fifth President and CEO of the South Carolina Ports Authority in September of 2009. Previously employed as President of Hapag-Lloyd (America), and before that, as Executive Vice President at Nedlloyd Lines and President of Nedlloyd Lines (USA) Corporation, his resume also leverages senior management experience in various roles the intermodal supply chain along the way. A Savannah native, Mr. Newsome received a bachelor's degree in Transportation and Logistics in 1976 and an MBA in Transportation and Logistics in 1977 from the University of Tennessee in Knoxville.

Newsome is arguably the ideal leader to position SCPA for the future, working not only to expand a port, but also to service the customers that he knows so well. That, according to Newsome, may well be the most important part of running a major port today. "We needed to make sure that we were focused on the needs of our customers. And, working for a major shipping line previously, I felt that I had a pretty good idea of how the major ports worked and what was important to the shippers and customers."

SCPA's chief executive knew only too well what was important to a shipping line. Beyond that, he was acutely aware of the 'big ship' trend in the industry and what SCPA needed to do to get ahead of it. "That led us to continue and renew our focus on deepening our harbor and to invest in a new terminal, as well as to improve existing terminals," says Newsome. All of that, Newsome knows, probably isn't enough, especially when the average citizen has no concept of where 98% of what they consume comes from and perhaps more importantly, how it got there. Community outreach, therefore, is a big part of SCPA's great leap forward.

Local middle school students, for example, will get to name the new container cranes. That represents a concerted (but fun) effort to educate children and adults alike as to the port's value, as well as the possibility of maritime careers. "We try to make sure people know that port jobs are good jobs – jobs that you don't need a four year college degree in order to make a good living," says Newsome, continuing, "We try to get middle school kids involved and interested in the port. When the maritime community gets involved with a local event like the annual 'heart walk' we raise over ten percent of the funds collected. We have a grant program that funds educational efforts and healthcare. We try to be good stewards. That involves co-existing with coastal communities and being a good corporate citizen."

Methodically Executing the Strategy

Today's good news involves years of planning and sweat equity. Newsome knows that better than most. "We finalized the study in a record time for a deep draft navigation project. Four years doesn't sound fast, but in a deepening project, it is very fast. Our last major step was to get authorized," he says, also conceding, "Authorized doesn't mean that you get a federal appropriation for the deepening, but it does mean that the federal government will maintain the harbor, once it is deepened. It's a $500 million project; a cost-share project and we need an appropriation of about $ 180 million from the federal government. It's never easy, but we feel that it's a good project and that we compete well."

TOP TEN U.S. SEAPORT DISTRICTS

PORT DISTRICT	Imports	Exports	Total
Los Angeles, CA	$250,229.91	$39,945.40	$290,175.30
Houston, TX	$75,023.44	$92,016.31	$167,039.75
Newark, NJ	$140,510.34	$11,549.82	$152,060.16
Long Beach, CA	$67,180.42	$37,275.84	$104,456.27
Savannah, GA	$52,199.34	$28,187.99	$80,387.33
Norfolk-Newport News, VA	$40,990.01	$30,480.58	$71,470.59
Charleston, SC	$44,640.36	$26,727.21	$71,367.57
New Orleans, LA	$24,653.24	$33,227.14	$57,880.39
Baltimore, MD	$33,853.28	$18,610.73	$52,464.01
Tacoma, WA	$40,923.38	$11,483.25	$52,406.63

Source: U.S. Census Trade Bureau (values in millions of dollars / 2014)

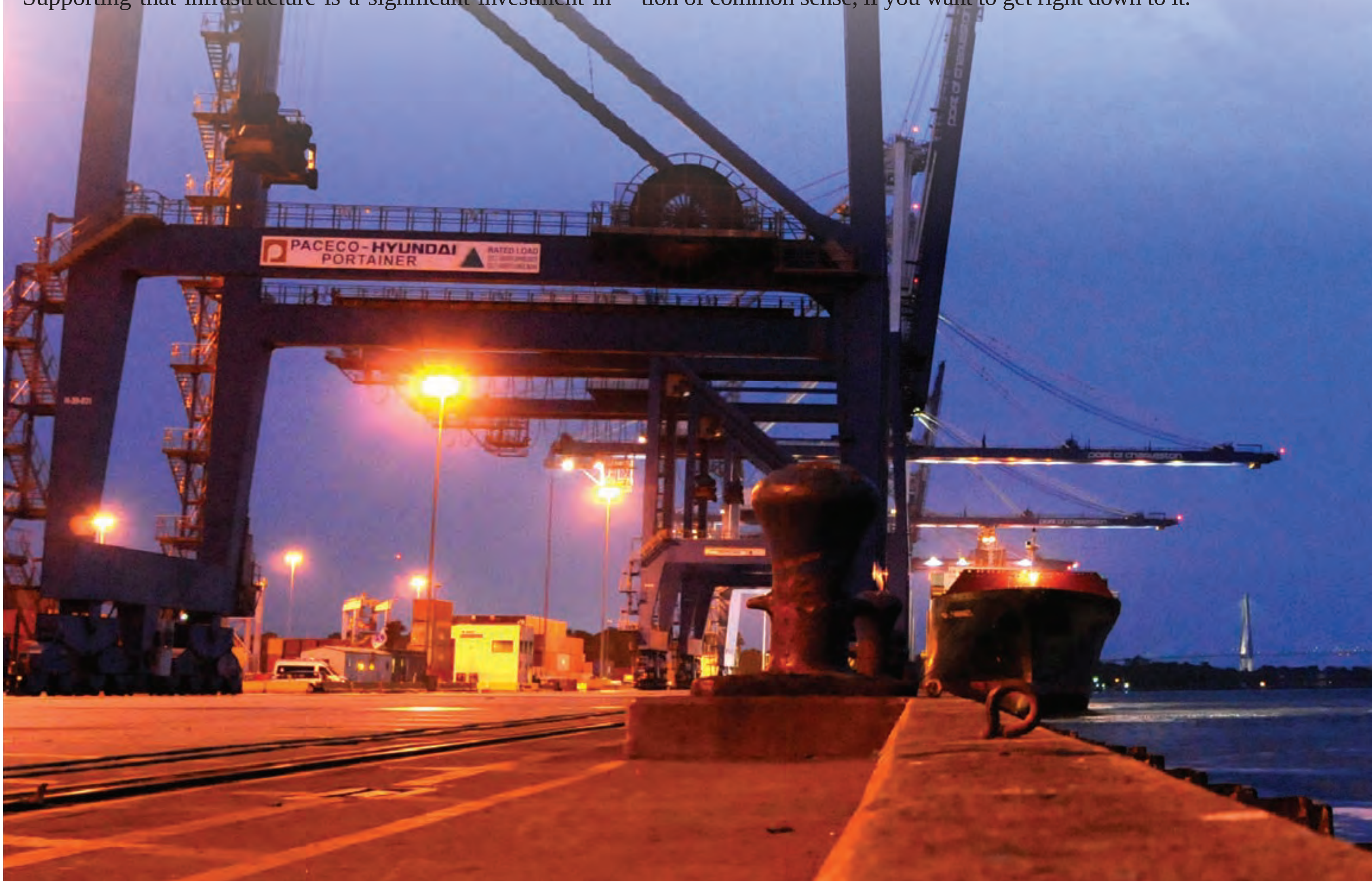
Image credit: SC Ports

In Charleston, the Corps (USACE) looked into three primary things: the financials, the environment and the navigation piece. In fact, this was the first such study done under something called 'Smart Planning' (SMART), with its intended purpose to reduce the time frame involved with the process. Newsome adds, "Some prior studies, for example, have taken up to twenty years; this one was done in just four."

But dredging is only one part of modernizing today's ports. Piers built for T-2 sized tonnage won't support post-Panamax sized boxships. Newsome lays out an aggressive strategy, already underway, to answer those questions. "The major challenge in a top ten port today is obviously about investment. That's what it takes to stay as a top 10 port. In our case, we're not only deepening our harbor, we're building a terminal to increase our capacity. And, we'll improve our existing container terminals were built in the 1980's, when ships were a lot smaller. We're strengthening the wharves with new pilings, installing new fender systems – significant investments that we simply have to make to handle the new Panamax ships. Our plan is to have two systems next year that can handle 13,000 TEU ships. And looking at the order books for today's container lines, we knew that we had to make these improvements to compete."

Supporting that infrastructure is a significant investment in operational technology, and in the face of another regulatory challenge, some good old common sense. The port is employing RFID technology and in fact has a new scanner as of June 20th. An advanced gate system works on camera technology which enables gate transactions to be processed faster, and in a safer way. Mechanics and clerks who are now housed in a gate processing center – or as SCPA calls it, the 'Kitchen' – keeps workers safer and doing the same work in climate-controlled conditions at a faster pace. "Certainly, our objective was not headcount reduction," says Newsome quickly, adding "Like any new technology effort, we had some initial system glitches but we got through that pretty quickly. I'm proud to say that today; we're handling a record number of transactions."

Newsome shrugged off questions about the controversial, but all-important container weighing requirement now in place everywhere. "I'm proud to say that we were the driver among U.S. ports, in terms of coming up with a very practical solution to do that. This involved weighing the containers as we had been doing all along for 30 years due to OSHA rules. Hence, our position was that we should continue to do what we were doing before. There is no inconvenience to the truckers – we have scales at every gate and it has worked very well. It was just an application of common sense, if you want to get right down to it."



Planning Ahead involves Looking Back

In terms of TEU throughput, Charleston now ranks 4th on the East Coast and 9th nationally. Jim Newsome and SCPA have plans to change those metrics. "We think we're going to grow twice the U.S. port market. Right now, we think the Southeast is the best place to be in the port business because we have an import growth based on population and export growth, based on expanding manufacturing." Pressed to project the port's future position the intermodal supply chain, Newsome offered, "I don't have an absolute number in mind; I certainly think that we can move up the top 10 list – perhaps 5th or 6th nationally as a stretch target."

Doing that means concentrating on and improving what the port already does best. That involves moving containers and manufactured, break bulk cargo "This includes RO/RO traffic, involving BMW vehicles, power turbines, things of that nature. We have a small niche cruise business which involves about 100 cruise ships annually, something we're not really looking to grow since we think we've already approximated the size of the market. We're happy with what we are focused on and there isn't a whole lot of new terminal capacity out there," says Newsome.

Thinking *Outside* the Port

SCPA bills itself as "the industry leader in delivering speed-to-market, seamless processes and flexibility to ensure reliable operations, big ship handling, efficient market reach and environmental responsibility." Statistically, it is also the fastest growing major U.S. port (since 2011) and by some yardsticks, the most productive in the nation, with high container crane production and low truck turnaround times. How it got there is, perhaps, the more important story. Jim Newsome, arguably, knows this better than most.

"My Dad was the number two man at the port of Savannah and I grew up around a port. It's why I got into the industry. But, I never worked in the port industry until this job. So, it was a unique segway for me to come back into this industry." That unique entryway and family heritage also provides Newsome with perspective that allows for equal respect for all parts of the equation. And, if the mark of a good deal is that all parties to the deal – in this case the intermodal equation itself – go away 'a little bit unhappy,' that's not something he's willing to say out loud. Instead, he says, there has to be something for everyone. At Charleston, South Carolina, that's the ultimate ticket to becoming a world class port – and staying there.

> "In America, it has always been my opinion that the biggest opportunity has been in intermodal operations. For example, pricing those services more competitively, doing those services more efficiently. There is a lot of waste in intermodal, and if I were back in the shipping line industry, that's where I would focus. I also see some opportunities in the chassis fleet area, and demurrage and detention can be more effectively handled."
>
> Jim Newsome, SCPA President and CEO

Image credit: SCA

A Formula for Success – in Good Times and Bad

Harvey Gulf International Marine hasn't deviated from its long term plans and goals, even as the price of oil negatively impacts all sectors. Apparently, this isn't rocket science.

By Joseph Keefe

According to Dr. Loren C. Scott, an industry analyst, retired professor and economist from Louisiana State University, U.S. oil production is up 85% since 2008 – the highest growth of any country in the world, over that period. Shale oil is largely responsible for that trend, with production increasing from 10,000 barrels per day (BPD) in 2003 to 1.2 million BPD in 2015. The impact of the resulting low price of oil on the offshore support sector of the maritime industry has been nothing short of devastating.

Largely as a function of the collapse in prices, U.S. oil production peaked at 9.6 mbpd in 2015, but will drop to 8.1 mbpd by year's end. Total rigs are down since 2014. Nevertheless, output from the Gulf of Mexico (GoM) by 2017 will be at a record high. Despite those numbers, rigs in the GoM are now down to 16 from a high of 56 reached in 2016.

Despite the bad news, at least one offshore support firm finds itself on firm footing, with the majority of its assets on the water and earning money. There is, says Harvey Gulf International Marine President and CEO Shane Guidry, a formula for that reality – in good times and bad. Very few offshore service providers would talk on the record during this difficult time. Harvey Gulf is one that did.

Bad News and ... More Bad News

There is plenty of bad news to go around. According to Dr. Scott, the situation isn't likely to turn around soon. The staggering low GoM rig count was recently further accentuated as ConocoPhillips announced that it was departing deepwater at the same time that two others paid hefty cancellation fees to escape drillship contracts. Western Gulf lease sales have plummeted from 2014 numbers (14 firms; 93 bids) all the way down to today's 3 firms who made just 24 bids.

Bakken on shore well costs are falling while the GoM continues to get more expensive. And, 14 new production platforms require just 25% of the number of service boats that drillships and drilling platforms would need. As the offshore energy industry negotiates with BSEE to lessen the cost of the new well control rules, GoM CapEx – and the rig count – is set to drop even further. There is good news to be found, if one looks hard enough at the raw numbers.

The 2014 'breakeven' costs for offshore drilling, through better technology and belt tightening, has dropped to about \$55-60 per barrel. Dr. Scott, in an address to the American Association of Port Authorities in October, projected a 2017 average price per barrel of crude oil of approximately \$53, possibly rising to \$60 in 2018, with recovery finally coming in 2019. Scott told his audience, "Things are tough, but they could be tougher."

Shane Guidry, for the most part, agrees. "Next year will be the most challenging year. 2018 will likely be worse and I think in 2019, we'll see the light again. It's about the price of oil forcing everyone to scrap projects and push them to the right. Less capital is being put out to work in this space," he told ***Maritime Logistics Professional*** in an exclusive interview, adding, "You've got debt holders out there; you've got investment bankers out there looking to come in and steal people's companies. So, let's face it: 2017 is going to be a mess." At the same time, Guidry says that those companies with a healthy backlog and that "are well run" will survive. At this point, though, there aren't too many that can boast both metrics. Harvey Gulf might just one of them.

Guidry also isn't shy about saying what will happen next. "I think the debt holders are going to look at which companies have the best management teams to stay invested in and make sure those companies have enough capital to survive. I think you'll see 'revolvers' for some companies cut and I think you'll see more bankruptcies. Consolidation is the key. People need to start focusing on that. Egos need to be put aside."

An Offshore Business Model: for good times, and bad

In the summer of 2013, ***Maritime Logistics Professional*** visited Shane Guidry for an exclusive interview. With the average price of crude oil hovering around \$105 per barrel – and about to go even higher – Guidry said, "There are other groups with more folks and boats, but we don't play in the DP1 arena. It's not high quality enough for us. I run my company differently. Our goal is to get 5-year charters for our boats. Today, 80 percent of our fleet have those; the rest have one to three years. We prefer five years and we'll give a discount to get it. I have a certain EBIDTA return that I want to make on each asset – somewhere between 57-67 percent, depending on the cost of the vessel, its size and ability to bring the higher amounts of cargo to get the higher rates. I'm comfortable not pushing the envelope; I'd rather have long term contracts that allow me to pay down debt and build assets."

In a nutshell, Guidry committed to a long term policy that he claimed would sustain his firm in the best of times, and just as importantly, leave it on solid footing when the times got bad. More than three years later, we asked him how that had panned out. As it turns out, privately-held Harvey Gulf has seen its share of the pain now plaguing the entire sector. With its headcount now down to 700 from a high of 1,200, Harvey Gulf's fleet of 59 vessels still has 34 working on the water. True to the Harvey Gulf formula, 26 of those 34 vessels are operating on time charters. And, according to Guidry, that's way it will stay.

"We're long-term thinkers and fortunately we don't live for today and we don't live to sell stock. Last quarter, our EBITDA was more than Seacor, Tidewater, GulfMark, and Hornbeck put together. Our returns were over 60%. That's purely from being in the business all my life, understanding my clients' needs, getting down in the weeds with my crew members and my staff, and working with them to understand what's coming next, how we all survive together, in your personal lives and in the business," insists Guidry.

Guidry also projects his firm's EBITDA will be over \$160 million this year. Facing a much different landscape than he could have possibly predicted in 2013, he also maintains that, aside from the necessary belt tightening, little has changed in terms of how he operates. Pressed to explain why, Guidry responded, "You have to decide: do you want to live for today or tomorrow? I've got a 10, 15, 20-year plan for this business. I'm not thinking 30, 60, or 90 days out. That model requires a lot more thought, more work, and a lot more relationship building. It requires you to be a better operator; it requires you to be a safe company. Because major oil companies tend to invest in long-term contracts with you – they have to really believe and see that your safety culture is true to what you're selling, so that when they lock themselves into this long-term contract, they know they're not going wake up three years from now dealing with a disaster."

For Guidry, the way forward still involves a strict culture of

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– Shane Guidry, CEO Harvey Gulf International Marine

safety, a fleet of modern redundant DP-2 tonnage, and a commitment to LNG power – both for the economy and the long term environmental benefits that it brings. We asked Guidry if the 'two tier' market that he envisioned is working out. He insists that it is. "Where you survive is lining yourself with big oil companies. Big oil companies are not going to sacrifice safety. If they can get with an operator that has operational excellence, like we do, at 99.9 percent utilization on contract, annually, they know they can run their business with fewer boats because they know we are reliable. They are still not going to sacrifice safety for rate. So, if they can get a DP-1 boat for $2,000 less per day, they simply won't take that risk. We haven't seen that."

LNG: pure & simple

Guidry clings to his plans for LNG; both in terms of his Fourchon-based bunkering operation and LNG/dual fuel tonnage has yet to be delivered. Separately, in stark contrast, representatives from Island Offshore, Remoy Shipping and Bourbon Offshore Norway recently offered a different perspective. "It's a bloody disaster," says Island managing director, Haavard Ulstein. "The amount of environmental effect these (LNG) vessels offer and also the amount of pluses saved by the clients and that converted into day rates for the owners is a disaster, and personally I have asked (Rolls-Royce business) Bergen Engines (AS) for technical proposals to convert those LNG engines into diesel. LNG is a big, big … a huge disappointment," Ulstein added.

Guidry couldn't disagree more. "We still see that the majors here in America want LNG. Just this year we've signed two five-year charters for two of our LNG boats still under construction. In this market, the rates make a ton of sense. So, yes, I still think LNG is the future and I still believe that you're going to pay more for it and you're not going to get the incremental increase in rate that you'd like to get because of the investment. But I'd rather have ten LNG boats working, than 10 diesel boats at the dock with no work."

The difference in price between LNG and diesel has shrunk, but LNG still remains the cheaper option. Guidry points to the operational advantages of operating a boat between Point A and Point B with only one generator. "Where my 'Shark Class' boat runs just diesel, I have to run two and three engines. On the LNG vessel, I'm running one big, low RPM-turning Wartsila engine on LNG, and I'm just crushing it for them. A huge difference."

Turning to his now established bunkering operation, Guidry admits he has no other customers, but says, "It's a long-term investment; a necessity for the space to grow." With the Harvey Gulf 300-foot class vessel – LNG verses non-LNG – about 25% less fuel is burned. Guidry adds quickly, "That's nothing to do with the dollar difference. Just fuel burned, period. And, that's one more place that the client saves money. What's more attractive about it is when you have emission monitoring that you have to do at certain, permanent sites offshore, that's where these boats come in and emit low emissions and so it helps with the problem at the platform." Looking ahead, Guidry believes that as that continues to tighten up in the future, it will make it more advantageous to have LNG boats, explaining, "The last thing you want to do is have a boat that you don't need for four hours, so you tell it to go outside the zone and stand by. We still have to account for the emissions, whereas right now you have to tell them, 'Go out to the 25-mile zone.' Well, that takes a lot of time to go out to 25 and come back in. Then you have to go two and a half hours away at 10 knots."

Today, Harvey Gulf has three working LNG vessels, one delivering in March, another in April, and the last will deliver next summer of '18 if Guidry decides to do it. With two five-year charters with oil major Shell (signed in March 2016) for the first two vessels, there's a good chance the third hull will become a reality. Separately, Harvey Gulf recently received full class approval for an LNG bunker ATB concept. Guidry claims to be negotiating with a potential client now for "a long term charter." If so, construction could begin as early as the first quarter of 2017.

Dr. Loren Scott insists that the LNG price is down and it is going to stay there. U.S. Natural Gas is today cheaper than EU and Far East sources, and as the price of crude oil recovers, that price differential (and related financial & environmental

advantage) will continue to grow, especially for those choosing to burn it as a source of propulsion. In the domestic offshore markets, only Harvey Gulf has made that commitment.

Safety

Back in the summer of 2013, Guidry boasted, "At our company, there is no budget in our safety department – they get whatever they want. They can make any changes they need to for the betterment of the boat; no matter what the cost or the time involved. Today, I've got 36 boats working and 18 safety people. It's my most costly division and there's no doubt it brings in the most in terms of return." Today – in a decidedly more glum business atmosphere – he also insists that not much has changed.

"Because the new, big boats have so many personnel, and they're so advanced, we're able to manage the fleet with one safety representative for each three boats. So, it's still the same. That hasn't changed. In July, we made three years with zero total recordable injuries (TRI)." Where, perhaps, BSEE might fear that safety will take a back seat to the bottom line in tough times, that hasn't been the case at Harvey Gulf.

What's Next – and 20/20 hindsight

The Harvey Gulf party line says that consolidation is something that needs to be looked at. Guidry adds, "If we were all smart guys then we'd figure out a way to consolidate companies. Not only would it help everybody survive a downturn, it would be profitable during this downturn for investors. I think we'd be much more successful when it does turn." That said; Guidry also doesn't think all the boats will go back into the water in the Gulf of Mexico.

That's not to say there isn't a place for many. According to Guidry, there is. "I think a lot of this tonnage is good tonnage, so it'll have an opportunity at some discounted price to replace boats in other markets around the world – 25 or 30-year-old 'junkers,' if you will. That's like bringing in new tonnage, for some people." Circling back to the current cast of players in the U.S. Gulf, Guidry doesn't think acquisitions are as likely as a possible merger. "People need to be focused on coming together, then seeing how we can survive together."

As sure of his game plan as anyone, Guidry also admits there might have been a few things that he might've done differently. His five, 300-foot diesel direct boats – for example – he wishes were all LNG-powered. "My two big construction boats – I probably should have made those LNG, as well." Looking ahead, he remains bullish on LNG. "The next big thing for us is LNG ATB bunker barges. You know, we're not an ATB business now, but it could be a platform for us not only in the LNG marine market ATBs, but it could be a platform for us to get in the ATB market, overall."

We pointed out that Harvey Gulf had once been in the transport markets, but had gotten out. Guidry acknowledges that reality but replies, "We got out and we would certainly entertain the opportunities to bid long-term transport contracts for new builds, of course. We're not opposed to owning tankers if the opportunity presented itself. We've been doing this since 1945, my family, and I'm lucky enough to learn from them to get all that knowledge and know how to operate vessels and, we think, operate them better than most. And there's nothing we don't think that we couldn't build and operate, which is another stepping stone for us to get to a different business."

Asked if anyone else was managing to make money in this offshore environment, Guidry shrugged and said, "It doesn't seem like it from the quarterly earnings reports you see. It'll catch up to us, too, if it stays bad. We just have to have a better mousetrap to keep our boats working, which we think we do. We think a lot of our LNG fleet and our 300 short class vessels, and we just brought two of the 220's out of stack and put them out to work."

In the end, says Guidry, it can come down to not so much wanting to be the biggest all the time. Just the best. "That's what you have to do. You have to stay focused and be safe. The record clearly shows that we are. I'm still young and I need to run my business myself every day and not let others run it for me. And, it'll continue to be successful." That's a business plan that hasn't changed much at all – from mid-summer 2013, to present day. He might just be on to something.

Shipping Industry Confidence Improves – with Caveats

Operating Cost Movements are Central to Shipping's Fortunes.

By Richard Greiner

Shipping has certainly lived up to its reputation for volatility during the past twelve months. The quarterly Moore Stephens Shipping Confidence Survey showed industry confidence improving for the second successive quarter in the three months to end-August 2016, but this was from its lowest level for eight years.

Familiar Story, a Welcome New Chapter

The industry has been beset by a range of all-too-familiar problems, including depressed freight rates, tonnage overcapacity in many sectors, problematic geopolitical developments and mounting regulation. The good news, however, is that total annual operating costs in the industry fell by an average of 2.4% in 2015. This compares with the 0.8% average fall in costs recorded for 2014, and is the fourth successive overall year-on-year reduction in such costs. All categories of expenditure were down on those for the previous 12-month period. This suggests continued pragmatic management of costs by ship owners and operators.

OpCost 2016, Moore Stephens' unique ship operating costs benchmarking tool, reveals that total operating costs for the tanker, bulker and container ship sectors were all down in 2015, the financial year covered by the study. On a year-on-year basis, the tanker index was down by 4 points, or 2.2%, while the bulker index fell by 6 points, or 3.6%. The container ship index, meanwhile, was also down by 6 points, or 3.7%.

Line Items: crew costs surprisingly down

There was a 1.2% overall average fall in 2015 crew costs, compared to the 2014 figure, which itself was 0.1% down on 2013. By way of comparison, the 2008 report revealed a 21% increase in this category. Tankers overall experienced a fall in crew costs of 1.3% on average, compared to the 0.4% fall recorded in 2014. All categories of tankers reported a reduction in crew costs for 2015 with the exception of Panamaxes and VLCCs. The most significant reduction in tanker crew costs for 2015 was the 3.6% recorded by Product Tankers.

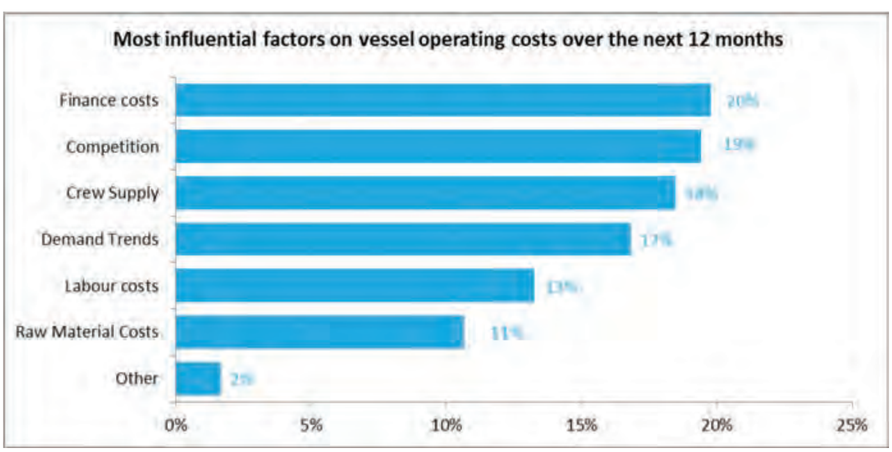
For bulkers, meanwhile, the overall average fall in crew costs in 2015 was 1.1%. The operators of Handysize Bulkers paid 2.3% more in crew costs than in 2014, but the operators of other categories of bulker paid less, in the case of Panamax Bulkers to the tune of 3.2%.

Expenditure on crew costs was down 3.3% in the container ship sector. The biggest fall in crew costs in this category was the 3.6% reduction recorded for vessels of between 2,000 and 6,000 teu.

Expenditure on stores was down by 4.3% overall, compared to the fall of 2.4% in 2014. The biggest fall in such costs was the 8.5% recorded by operators of Capesize Bulkers, with Panamax Bulkers (8.2%) not far behind. For bulk carriers overall, stores costs fell by an average of 7.7%, compared to a fall of 3.7% in 2014, while in the tanker and container ship sectors the overall reductions in stores costs were 4.3% and 5.5% respectively, compared to the corresponding figures of 0.7% and 3.0% for 2014.

There was an overall fall in repairs and maintenance costs of 4.3%, compared to the 0.6% reduction recorded for 2014. Only VLCCs and Container Ships of between 1,000 and 2,000 teu recorded increased expenditure on repairs and maintenance, of 0.1% and 1.3% respectively. Otherwise it was a case of reduced spending everywhere.

The overall drop in costs of 3.2% recorded for insurance compares to the 0.4% fall recorded for 2014. No vessels in the bulker category paid more for their insurance in 2015 than in 2014.



Handysize Bulkers paid considerably less (5.7%) as did Panamax Bulkers (5.3%). Product Tankers and Tankers of 5,000 to10,000 dwt were the only vessels in the tanker category to pay more for their insurance in 2015 than in the previous year, to the tune of 1.3% and 0.6% respectively. The biggest increase in insurance costs, however, was the 2.6% recorded by LPG carriers in the 10,000 to 40,000 cbm range.

The biggest cost reductions were predictably those in the Stores and Repairs and Maintenance categories. Falling world oil prices continued to have a knock-on effect on lube oil costs in 2015, while increasing numbers of owners were looking to strategic short-term lay-up rather than spending on maintenance and repair.

The fall in crew costs arguably came as more of a surprise to an industry which has over the years absorbed increases of this type in excess of 20%.

Taking Stock and a Look Ahead

Last year, operators were not overly optimistic about making new investments in the short-term, while finance costs were predicted to rise. Nobody was expecting good news on dry bulk freight rates, and the outlook for tanker and container ship earnings was little better. The Baltic Dry Index, meanwhile, was getting ready to plumb the depths. It was not an auspicious time to be planning new ventures; rather, it was a time for taking stock and for keeping operating costs to a minimum.

Shipping can draw comfort from a fourth successive annual fall in operating costs. But it should remember that costs can move both ways. OpCost records that, at year-end 2001, for example, the average daily operating cost for a Handymax Bulk Carrier was US$3,578. In 2015, it was US$ 5,604. For a Suezmax Tanker, the comparable figures are US$4,916 and US$9,170.

Looking further ahead, vessel operating costs are expected to rise by 1.9% in 2016 and by 2.5% in 2017. A Moore Stephens survey of future operating costs has revealed that the cost of repairs and maintenance is expected to increase by 1.7% in 2016 and by 1.9% in 2017, while expenditure on spares is predicted to rise by 1.7% in 2016 and by 1.8% in 2017. The cost of drydocking expenditure, meanwhile, is predicted to increase by 1.5% and 1.8% in 2016 and 2017 respectively.

The survey revealed that the outlay on crew wages is expected to increase by 1.3% in 2016, rising to 1.8% in 2017, with other crew costs thought likely to go up by 1.2% and 1.4% respectively for the years under review. The increase in outlay for lubricants is predicted to be 0.8% and 1.4% in 2016 and 2017 respectively, and that for stores 1.3% and 1.7%. Meanwhile, projected increases in management fees are 1.0% and 1.2% in the two years under review.

The cost of hull and machinery insurance is predicted to rise by 0.9% and 1.1% in 2016 and 2017 respectively, while for P&I insurance the projected increases are 1.1% and 1.2%.

The predicted overall cost increases for 2016 were highest in the container ship sector, where they averaged 3.3% against the overall survey increase of 1.9%. By way of contrast, predicted cost increases for 2016 in the offshore sector were just 0.2%. Container ships also headed the expected cost increases for 2017, at 3.4% compared to the overall survey average of 2.5%. Tankers featured in second place for both years at 2.5% for 2016 and 2.9% for 2017.

Meanwhile, 20% of respondents (compared to 22% in last year's survey) identified finance costs as the most significant factor likely to affect operating costs over the next 12 months, followed by competition at 19% (down from 22% last time), and crew supply (18%).

Wild Cards & Warning Signs

While the level of predicted increases for this year and next will undoubtedly be the cause of some concern, it is instructive to note by way of example that the average operating cost increase absorbed by the industry in 2008 was no less than 16%. Meanwhile, one year ago, expectations of operating cost increases in 2016 were 2.8% on average.

The fact that repairs and maintenance costs headed the list of predicted cost increases in both 2016 and 2017 may be due to a number of factors, including the need to commit to repairs and maintenance deferred in earlier years, and the opportunity to do so at a time when the alternative could be to struggle to compete in a difficult economic and industry climate.

One highly influential factor behind the anticipated rise in drydocking costs, most notably in 2017, is the entry into force of the Ballast Water Management Convention in September 2017, before which date some owners may choose to put their ships into drydock to ready them for the new legislation.

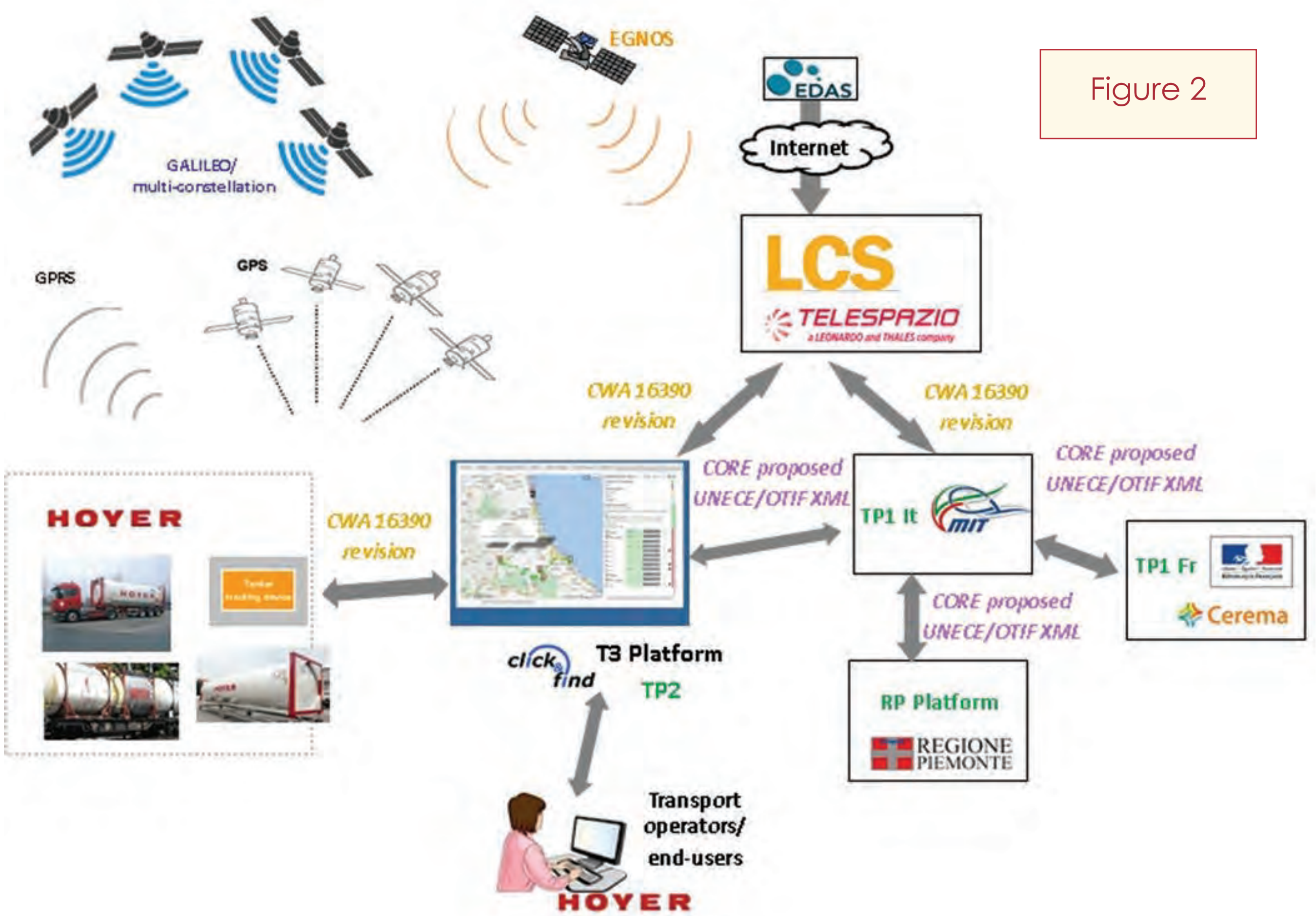
The anticipated rise in crew wages and other crew costs, meanwhile, is arguably lower than anticipated, and there was indeed a feeling on the part of some respondents that wages could stabilize this year or even go down.

Shipping faces a number of potentially costly compliance responsibilities, including the imposition of a 0.5% global cap on sulphur emissions with effect from 2020. Other operating issues include predicted increases in the price of fuel, which will have a knock-on effect on lube oil costs.

Shipping is an industry with a guaranteed future, but just how healthy that future will be depends on its ability to generate sustainable profits after operating costs have been met.

Richard Greiner
is a Moore Stephens Partner, in their Shipping & Transport group. He Richard has over 30 years experience in providing assurance and advisory services to the shipping and offshore maritime industries. A frequent speaker at shipping events, he is a council member of the Ports and Terminals Group, Maritime London and a trustee of the Maritime London Officer Cadet Scholarship.

CORE EU Project:
assessing the intermodal supply chain



The EU sponsored R&D project CORE (Consistently Optimized REsilient Secure Global Supply-Chains) began in 2014. Along the way, it analyzes the use of EGNOS and Galileo for the intermodal transport of dangerous goods, assessing its ability to deliver optimum safety, security and supply chain efficiencies.

By Antonella Di Fazio

Figure above: CORE demonstrator for the intermodal transport of dangerous goods

Safety and security can be greatly enhanced if businesses are encouraged to use robust and reliable real-time tracking & tracing of their shipments of dangerous goods. The newly available 'precise information' regarding the status of a certain dangerous material, and of potentially dangerous events that occur which currently go unnoticed, represents fertile ground for many operational and relational improvements in business. At the same time, crucial pieces of data can be provided to regulators that are responsible for public security.

Every year, the transportation of dangerous goods amounts to approximately 150 billion tonne-km on European roads, railways and inland waterways. The safety and security of operations are common concerns and as such, localization and tracking technology can help by enabling the continuous reliable control and monitoring of dangerous goods traffic during transport and the collection of data to be further analyzed for statistical reporting and incident prevention.

Traceability and monitoring are therefore key elements both for intelligent and efficient transport logistics, and for ensuring safety and security in the dangerous goods' supply chain.

State of Play: where Europe is

Tracking and tracing solutions which are widely adopted for the transport of dangerous goods are largely based on the use of devices using satellite navigation technologies (GNSS / Global Navigation Satellite Systems, primarily GPS) for localization and different telecommunication means for data transmission (satellite and/or terrestrial). These devices are installed on board the freight vehicle or on the asset, and can integrate sensors (primarily based on the use of Radio Frequency Identification technologies) to enable the monitoring of the status of the goods.

Stakeholders agree that reliability is a fundamental requirement for monitoring the transport of dangerous goods. This is where the European Global Navigation Satellite Systems (EGNSS), for example, the European Geostationary Navigation Overlay Service (EGNOS), can play a significant role. ***EGNOS provides three services:***

- *EGNOS Open Service (OS), launched in 2009, is delivered free of charge. It is open for use to anyone with an EGNOS-enabled receiver. This can be any receiver compatible with satellite-based augmentation systems. Being based on GPS, the EGNOS signal does not require major changes for receivers. Today, many mass market receivers available on the market are also EGNOS enabled. EGNOS OS is particularly suitable for mass market and some applications like surveying.*
- *EGNOS Safety-of-life Service (SoL) is authorized for European civil aviation and has been operational since March 2011. EGNOS SoL delivers the integrity message providing the verification of the GPS system and timely warnings (within six seconds), when the system or its data should not be used for navigation. This feature means that EGNOS is able to meet the demands of safety-critical applications in sectors such as aviation.*
- *EGNOS Data Access Service (EDAS) launched in 2012, delivers a terrestrial commercial data service. It consists of a server that gets the data directly from the EGNOS system and disseminates via terrestrial networks in real time, within guaranteed maximum delay, security and performance. EDAS is particularly suitable for professional applications.*

EGNOS augments the GPS signal. It provides more precise positioning services (up to 3-4 meters) and in addition, it gives users information on the reliability of the GPS signals, reinforcing data integrity.

Conceived for the aviation needs, EGNOS has interesting perspectives of utilization in other markets. EGNOS OS and EDAS are suitable for the Intelligent Transport Systems (ITS) sector, particularly for those applications requiring accurate and reliable positioning. The receivers available today on the market and integrated within operational systems/tracking devices are EGNOS-enabled. ITS is a combination of Information Technology and telecommunications, allowing the provision of information and services for transport and mobility applications, in all areas of public and private administration.

Software solutions and technologies are needed to utilize EDAS, and build/offer commercial value added services exploiting EGNOS features. Figure 1 presents one of the outcomes of extensive trials conducted in various road environments.

Users of the EGNOS OS are able to enhance the accuracy of the position measured with GPS by approximately three meters. EDAS could bring further enhancements by approximately four meters. Moreover, the use of EDAS provides in-

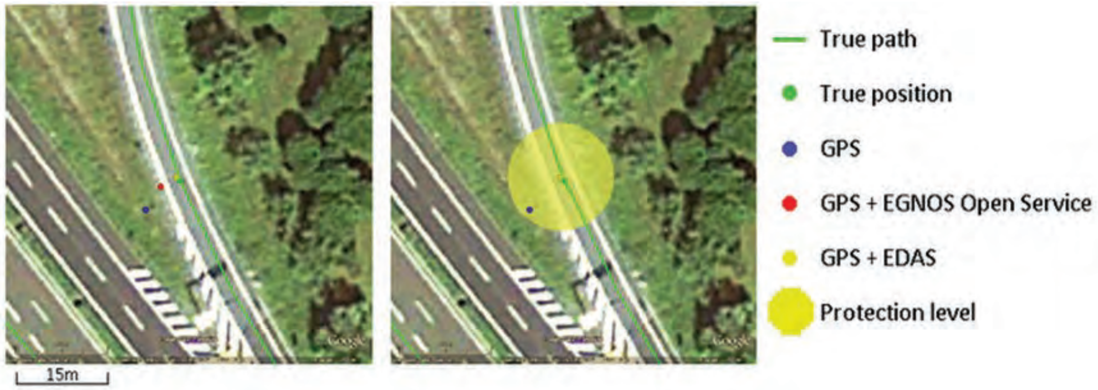


Figure 1

Comparison between the positions measured with GPS-only, EGNOS OS and EDAS

formation (called 'protection level' and obtained by suitably processing the 'integrity data' of EGNOS) for qualifying/guaranteeing the measured position.

Thus, EGNOS can improve the performance of the services delivered by ITS based on GPS only, making them suitable for applications requiring precise and reliable localization.

Where to Go: The Impacts of Robust Localization and Tracking

Safety and security can be greatly enhanced if businesses are encouraged to use robust and reliable real-time tracking & tracing of their shipments of dangerous goods. The newly available 'precise information' regarding the status of a certain dangerous material, and of potentially dangerous events that occur which currently go unnoticed, represents fertile ground for many operational and relational improvements in business. At the same time, crucial pieces of data can be provided to regulators that are responsible for public security.

It is a fact that approximately 85% of the shrinkage in the overall supply chain occurs while materials, components or finished goods are in transit. To reduce this figure, reliable technology for tracking & tracing will be beneficial. In order to quantify the potential benefits of a reliable 'track & trace' system, one may draw on analysis in "The CIP Report" (a monthly publication issued by the U.S.-based Center for Infrastructure Protection and Homeland Security). Joe McKinney and Arthur Radford affirm that the availability of precise information in relation to supply chain activities results in average cost savings from supply chain operations of 3% to 5% and inventory investment savings of 7% and more. These savings combined will reduce unit cost of goods sold by an average of 0.5%.

Furthermore, economic benefits will derive from the implementation of such technology. First, the various market players will receive a valuable incentive to "go intermodal" by reducing complexity and solving some pressing interoperability issues. Secondly, the rail sector – a backbone of the supply chain system – will benefit from the introduction of EGNOS to track and trace the transport of dangerous goods. In fact, an EGNOS-based solution for rail could provide just-in-time processes and the possibility to establish a responsibility/liability chain in case of delays, with positive impacts on the quality of transport services. Lastly, EGNOS implementation may be a further step towards the simplification of administrative procedures and the adoption of e-Customs.

How do we get there?

As detailed above, tracking systems can improve the efficiency and safety of connecting products with the consumers who buy them each and every day. When dangerous goods are transported, the benefits are not only from the perspective of transportation providers, but also imply public and social interests. Presently, GPS tracking continues to be the most used solution.

In the last decade, various European projects have developed and extensively proven various solutions based on the EGNOS technology, especially for applications and markets for which safety, security and liability play a dominant role. In fact, EGNOS enhanced positioning and integrity provides precise and reliable localization and tracking, and thus meets the challenge of regulations and qualified transport services.

A European Research & Development (R&D) project, SCUTUM, which ended in December 2011, demonstrated that for the transport of dangerous goods, EGNOS adds value to GPS thanks to its accurate and guaranteed positioning that results in higher confidence in the data. SCUTUM proved EGNOS added value compared to GPS alone, and validated the relevant operational benefits in terms of higher safety and efficiency.

Today, because of SCUTUM, EGNOS is used in the operational transport of dangerous goods by road in Europe (Italy, France, Austria, Slovakia, Hungary, Romania, Czech Republic), and around 1,200 road tankers are monitored with GPS+EGNOS. Moreover, SCUTUM also explored other applications for EGNOS in the short term in Europe and in preparation of the global market for Galileo. In particular, the rail transport of dangerous goods was considered by SCUTUM

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as the next promising step, being rail the sector beside road where EGNOS opportunities have to be exploited further.

Capitalizing on this heritage, the EU R&D project, CORE (Consistently Optimized REsilient Secure Global Supply-Chains), which began in 2014 and will run until 2018, analyzes the use of EGNOS and Galileo for the intermodal transport of dangerous goods, in terms of safety, efficiency and also security. One of the demonstrators developed in CORE extends SCUTUM to the intermodal road-rail transport of chemicals and gas shipped across Europe ("Intermodal transport of Dangerous Goods" demonstrator).

Figure 2 shows the ITS solution developed in CORE for this demonstrator. The solution integrates multi-GNSS technologies, based on the European systems (EGNOS and Galileo), the Russian system GLONASS and the Chinese system BEIDOU, for tracking and tracing the transport of dangerous goods.

The solution is validated in life operations and in real business cases of intermodal tankers transporting Argon throughout road-rail paths across Europe, from Germany to Italy, and from Austria and France to Italy. HOYER, a European transport company operating in the sector of chemical and gas, and Italy's and France's Ministry of Transport are involved in the demonstrator, providing the perspectives of the business and the authorities' stakeholders.

CORE's solution for the "Intermodal transport of Dangerous Goods" demonstrator contributes to the implementation of the Cooperative-ITS (C-ITS) in Europe, and specifically to the creation of value added services oriented to the transport of special goods and sensitive materials.

Antonella Di Fazio works at Telespazio, an Italian company that is part of the Leonardo/Finmeccanica-Thales space alliance, and having satellite services core businesses. Antonella is in charge of satellite navigation applications & services. She is the coordinator of the CORE demonstrator related to the transport of dangerous goods.

DACHSER USA's Frank Guenzerodt

Managing Today's Modern Supply Chain with Logistics Expertise.

By Jim Romeo

DACHSER
Intelligent Logistics

Frank Guenzerodt,
President and CEO, DACHSER USA Air and Sea Logistics Inc.

The finesse of supply chain management in today's global climate is certainly different than it was, just a few years ago. Supply chains are more complex and these operations and management structure form a critical ingredient in the business strategy of every company, no matter they reside in the greater global economy. Gone are the days of staid, backroom staffers who worked as traffic managers and were more reactive to the flow of goods across many challenges.

Today's supply chain seeks a lean and efficient operation, driven by leadership that is mindful of a global network of operations that must insure on-time delivery and protection of shipments to arrive intact and according to schedule. DACHSER USA is one such logistics firm seeking to take on all modern challenges of keeping the supply chain moving sufficiently. Behind its operation is Frank Guenzerodt, President and CEO, DACHSER USA Air and Sea Logistics Inc.

Guenzerodt oversees the company's U.S. logistics network of branch offices and its services. Since joining the corporation in 2004, he has led the company's strategic growth program to increase its footprint in the United States, along the way providing greater reach and value for customers. Under his leadership, company revenue expanded from $11 million in 2004 to $120 million in 2011, and over $192 million in 2015.

Guenzerodt expects more revenue growth as he positions the company to gain market share in different vertical industries, expands its footprint in key U.S. regions, strengthens its U.S. infrastructure and capacities, and opens new office locations to support business expansion. With over 30 years of transportation and logistics management experience, Guenzerodt is an opinion leader for the logistics industry and frequently consulted with by media outlets and other organizations for insight.

Prior to DACHSER, he held management positions at multinational freight forwarders, including the U.S. headquarters of a Belgium-based forwarding and logistics company where he was tasked to lead all U.S. operations. Listen in as DACHSER's Atlanta-based Frank Guenzerodt provides his take on today's global logistics industry, where it is heading, how, and why:

Can you provide an overview of your organization and its role in supply chain logistics?

DACHSER is one of the global leaders in supply chain logistics. Combining its seamless, global transport network, with warehousing, customer-specific services and exemplary IT solutions, DACHSER creates the most intelligent combination and integration of logistics network competences worldwide. With a staff of 26,506 employees at 428 locations in 43 countries, DACHSER generated revenue of EUR 5.64 billion (USD 6.25 billion) in 2015. The family-owned logistics service provider handled 78.1 million shipments with a tonnage of 37.3 million tons. Founded in 1972, DACHSER USA Air and Sea Logistics Inc. is the U.S. subsidiary of DACHSER SE. DACHSER USA, and is headquartered in Atlanta, with branch offices in Atlanta, Baltimore, Boston, Charlotte, Chicago, Cincinnati, Dallas, Houston, Los Angeles, Memphis, Miami, Minneapolis, New York, Phoenix and St. Louis. DACHSER USA offers optimal access to international markets and ensures seamless integration of all import and export activities via air or ocean to and from Europe, Asia and South America.

How has your organization changed in the recent past to adapt to the changing demands of the logistics market?

Our organization in the United States has been on a path of strong growth over the last few years. For most countries, the U.S. is the number one or number two trading partner, and therefore we need a strong network in the U.S. to support our growth worldwide. Our plan is to have 25 offices nationwide by 2020. In the meantime, we have also expanded our product offerings to complement and complete our service portfolio. We now offer warehouse management services in the U.S. and have been building up our domestic freight forwarding. Ongoing development and investments into IT solutions are a requirement to successfully manage the intricate and detailed solutions for our customer's supply chain challenges.

From your perspective, what are your greatest challenges in the world market for logistics that your firm faces?

The markets are becoming more and more volatile; overcapacities and lower volumes, especially in ocean freight, are putting carriers under pressure. Availability of trucks and chassis across the U.S. to perform import door deliveries, and export door pickups, continue to be a major concern. The truck driver shortage will also get worse over the next few years. This will increase truckers' costs; hence shippers' rates will rise. Supply chain disruptions and delays have to be anticipated on behalf of our customers, and proactive corrective solutions must be readily available and planned in advance. Customers demand a holistic service from a single source with a central contact person, constantly monitoring the supply chain, and ensuring high quality standards. Close cooperation with the customer is vital to successfully manage the logistics and supply chain solutions proactively.

What advice would you give to others forward of you in the supply chain? How about those behind you in the supply chain?

The ability to manage the complete supply chain requirements for customers is becoming more and more important. One can employ other service providers, but the overall coordination of logistics needs to be handled by the provider to successfully execute solutions. Close interaction with the customer is essential for success and a quality operation.

What are some misconceptions about managing for success in the global logistics market?

One misconception is that complex situations can be easily simplified, but we have to approach them with a complex set-up on our side. The world of logistics is highly interconnected and complex. We don't just rely on technology for supply chain design. Uniform IT systems are vital to ensure the global flow of data across all interfaces, but our people have to analyze and interpret the data and therefore are our most important asset. They have to think outside of the box and be creative to find the best solutions for our customers. Additionally, disruptive events such as port strikes, natural disasters or quickly changing market conditions must be managed, but cannot always be immediately overcome 100 percent of the time.

Do you feel regulations – either those instituted by the United States, or those from world organizations are overly burdensome? How do you feel regulations governing supply chain logistics could change?

Worldwide regulations are necessary and we make sure that we – and our customers – fully comply with them. Over the next years more and more regulations will be added making it even more important for shippers to have a good partner who can help them navigate. Many of the regulations are focused on supply chain security and unfortunately necessary in today's world. A detailed and accurate process design will help in dealing with such regulations smoothly.

What about cyber security? Do you think it's something that shippers as well as other supply chain firms need to be engaged in? If so, what are the most important steps to be sure are taken ahead of time?

Yes, cyber security is definitely a topic that shippers and

3PL companies alike all need to be engaged in. Our industry depends on a high amount of worldwide data sharing and exchange. Logistics companies have always relied heavily on IT. A secure IT infrastructure is needed to protect data from cyber attacks and make sure Internet applications are secure. Standardized IT security policies and processes need to be in place to ensure full data integrity. Safeguarding our customers' information has a very high priority for us. Data exchanges between the various entities in a supply chain must be handled in an encrypted and secured environment. And last, but not least, safeguarding data also enhances the security of a supply chain. At DACHSER all centralized server components, network connections and business-critical IT components are housed in a secure data center in order to ensure operational and data security.

In your opinion, what are some of the greatest encumbrances to your business and its efficient operation?

Talent acquisition and retention. With our staff being the most important asset we have, we have to make sure we hire the right people and continue to educate and motivate them. The business has become much more sophisticated over the years and requires a higher level of knowledge for the people involved in designing and implementing supply chain solutions. It's not just moving a shipment from A to B anymore. Our customers' supply chains are exactly timed, so they need a reliable modern supply chain process, which needs to be managed by logistics experts.

Jim Romeo is a writer based in Chesapeake, VA. He is a 1983 graduate of the United States Merchant Marine Academy and a 1986 graduate of Columbia University, where he received an MBA in Logistics and Transportation. He has held a steady progression of management positions within the Maritime industry. He has authored two books and well over 800 publications and is currently a columnist for three trade publications.

There's a New Kid in Town

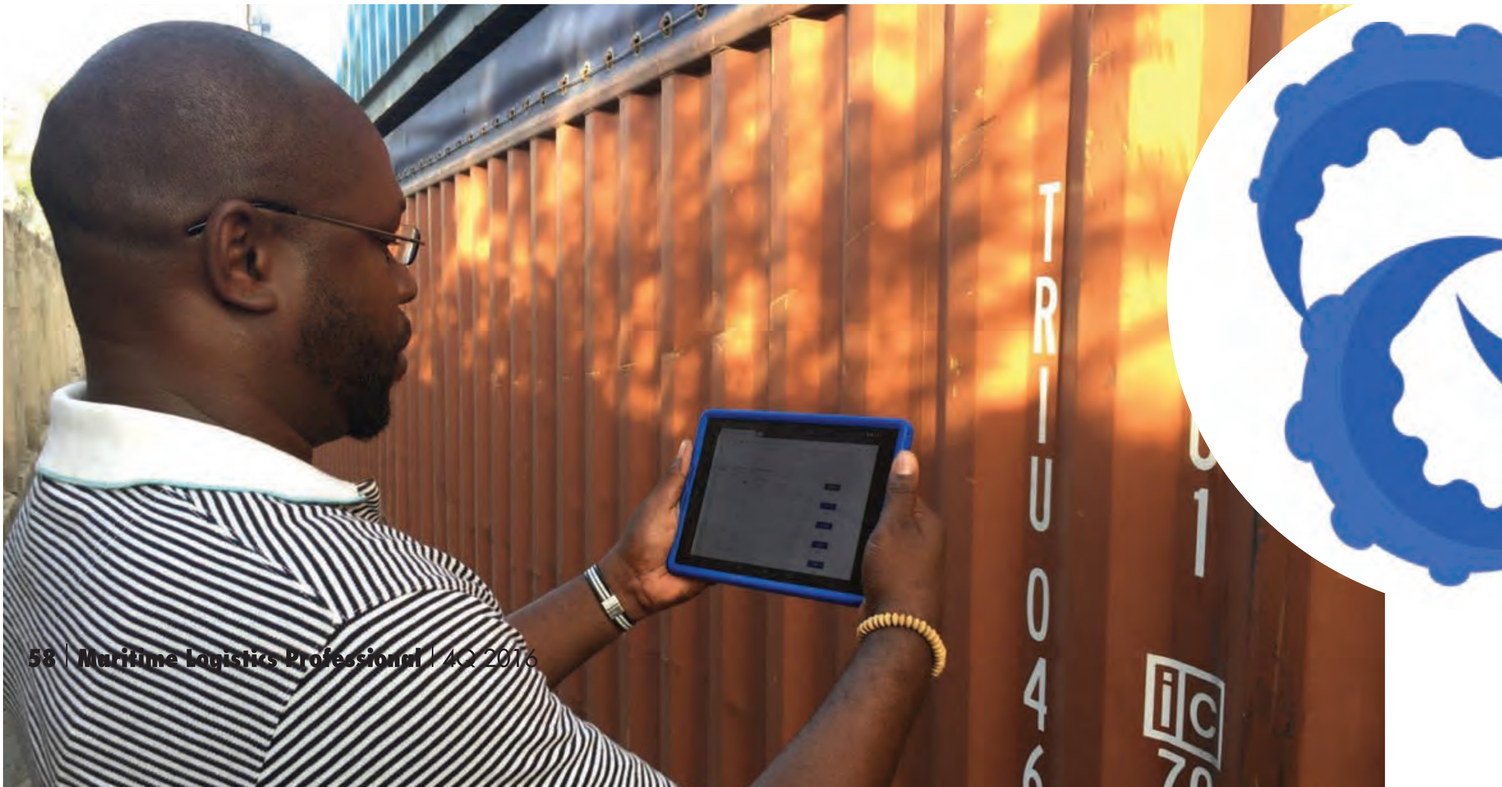
The Octopi Terminal Operating System targets small to medium sized container terminals. In this case, size does matter, but bigger isn't necessarily better.

By Joseph Keefe

In the global supply chain, billions of dollars are at stake and virtually 98% of all consumer goods for the world's population travels via ocean transport. The recent collapse of one of the world's largest ocean carriers brought that reality into sharp focus. In that case, 'bigger' didn't translate into 'better.' Hence, when it comes to the tracking and documentation of this cargo, there is every reason to make sure that who you trust that task to is not only competent, but also has the wherewithal to be there when times get tough.

In a world where value is often (incorrectly) measured in terms of how many boxes you can cram onto a post-Panamax containership, terminal operators are searching for the right IT solution to provide that all-important competitive edge. Answering the call is a Miami, FL-based software company that provides Terminal Operating Software (TOS). Their first product, Octopi, is a new take on TOS systems. The management team of Luc Castera and Guille Carlos claim that terminal operators can use Octopi to efficiently track the movement of shipping containers, communicate their location with shipping lines in real-time, and maintain an accurate history of cargo movements.

Octopi went live with its first customer in October 2015. For their part, Castera and Carlos – until now, a relatively unknown quantity on the waterfront – have more than 20 years of combined experience developing software. In a previous life, Castera was CTO of Intellum and Carlos was the first tech hire of FiveStreet, which was acquired by move.com in 2013. That was then, this is now.



Octopi is built with three guiding principles – first, TOS data should be presented in a way that makes sense and allows customers – operations and c-suite personnel alike – to make data-driven decisions. Secondly, Octopi is designed to be user-friendly. Finally, a lot of the smaller to medium sized container terminals don't have, and further do not want to spend a lot of money putting together a big IT team – something they might need to support some of the existing TOS solutions. That's why Octopi was built exclusively as a cloud-based solution.

Wet Feet

Octopi isn't a name that today rolls right off your tongue. By May of 2016, however, the company had signed a contract with Caribbean Port Services (CPS), which manages all the terminals at the port of Port-Au-Prince, Haiti. With that contract, about 85 percent of all containerized cargo going to Haiti now goes through Octopi. Before that, in April, Octopi (then called Cetus Labs) was also the winner of the 2016 early-stage Startup Showcase competition at eMerge Americas.

In June of this year, Octopi completed its billing module, which allows the software product to interface with accounting software such as Quickbooks Online or Microsoft Dynamics GP. According to Octopi co-founder Luc Castera, this is just the beginning.

Castera told MLP in November, "We saw an opportunity in this market and built this application for terminal operators. Our first customer came in October 2015 in Port Au Prince, Haiti, with a terminal operator named IMT. They do about 65,000 TEU's and it was quite a success story. We improved their productivity by about 50 percent. It was such a success that the other two operators at the port – there are three – decided to use Octopi."

Castera says their early success hinged on just three things. "Number one, the existing vendors tend to target the bigger terminal operators, and some smaller or medium terminal operators felt that the existing solutions weren't a good fit. It also had to do with pricing and the amount of effort involved with implementing the system. And, they wanted to be live; quicker and faster. And, they needed some specific features, for example, that would be very difficult for a small operation to get from bigger software companies. We were not only able to do that, but also fit their business model, as well."

Thinking Local:

Not only was Octopi's first client a small Caribbean-based box terminal, it also had some unique operating requirements. It turns out that when a container is unloaded at the port, it needs to be put on a truck which transits a back road to go to one of three terminals. It was all about tracking that box at each point until it gets "gated in" at the back terminal. And, in this case, once the other two terminals saw better productivity when using the Octopi system, they wanted to switch, as well.

From Haiti, Jean Philippe Baussan, Vice President of Caribbean Port Service (CPS), weighed in on his experiences with Octopi. He told MLP, "Octopi was the perfect fit for our terminal size. The other well known and established providers

"We saw an opportunity in this market and built this application for terminal operators. Our first customer came in October 2015 in Port Au Prince, Haiti, with a terminal operator named IMT. They do about 65,000 TEU's and it was quite a success story. We improved their productivity by about 50 percent. It was such a success that the other two operators at the port – there are three – decided to use Octopi."

– Luc Castera, co-founder of Octopi

did not seem to be interested in our business. The implementation time was too long and customization to take into account some particulars of our market were very costly."

Baussan touted the cloud-based nature of the Octopi system. "There was no need to install and maintain costly servers in Haiti. This is being managed by the Octopi team and allows us to concentrate on our core business." Once installed, Octopi moved his terminal from a 'Pen and Paper' operation to a paperless one, improved data accuracy and transparency with EDI, provided remote live dashboards and created a user-friendly truck appointment module. As a result, he said, truck turnaround time inside the yard improved.

That cloud based solution helps in other ways, as well. When hurricane Matthew blew through Haiti in October, Octopi never missed a beat on the tiny island. "That showed the power of the cloud. The IT team in Port Au Prince went to bed and had a good, sound sleep because they didn't have to worry about their servers," said Castera, adding, "Actually, at 7 AM of the next day after of hurricane, we started seeing movement at the terminal. We had 100 percent up time – the system never went down."

Separately, says Castera, the security of the cloud manifests itself in other important ways, as well. The all-important topic of cyber security begins, insists Octopi's founders, with physical security. Castera told MLP, "Physical security involves our cloud based servers being located in what we call bunkers. You have to go through a lot of security check points just to get in. So, physical access to these servers is extremely difficult. And, this involves back-up generators and other safeguards built into that bunker." The alternative, he says, is to have a server located at the port. "We have seen more than one terminal where these servers were not considered high security locations. I could have walked right in, stuck a USB stick into the server and gained access."

Pricing

In a market so opaque that it is difficult to find comparative pricing information, what a terminal might pay for a TOS solution can vary greatly from project to project. Castera has a different plan. "From our side, we're trying to keep the pricing simple. We have a onetime upfront cost which pays for implementation, time spent understanding your operation and requirements and a short training window to bring workers up to speed. "When I say training," adds Castera quickly, "it takes just 30 minutes to one hour to train one employee. After that we simply charge a license fee that covers all hosting and maintenance. That's a yearly fee, based on the size of your port."

Beyond their unique pricing model, Octopi also allows customers to have as many users as they want. This includes allowing the terminals to give access to different traders in the supply chain. Castera explains the practice, saying, "The beauty of that is that you can access it from anywhere – you don't have to be physically located at the port itself. The shipping line in Egypt, for example, could be given access so that they have more data transparency. And, we are finding that consignees get tons of value from those privileges. But, we don't charge for that extra seat. We've talked to terminals who, given that option, would charge others for that access, but no, we don't intend to do that. It is possible that our customers


Port-Au-Prince, Haiti

could make money using Octopi, charging other stakeholders for access. That's a client decision, though."

There's a New Kid in Town

Octopi is built with three guiding principles – first, TOS data should be presented in a way that makes sense and allows customers – operations and c-suite personnel alike – to make data-driven decisions. Secondly, Octopi is designed to be user-friendly. Finally, a lot of the smaller to medium sized container terminals don't have, and further do not want to spend a lot of money putting together a big IT team – something they might need to support some of the existing TOS solutions. That's why Octopi was built exclusively as a cloud-based solution.

Octopi's target market includes any small to medium sized terminal moving 2,000 to 300,000 TEU's annually. Castera explains, "That's our market. We're definitely looking at the U.S. markets, because some of these huge ports actually have multiple terminals and operators. Some can have as many as 5 to 10 terminals each."

The Miami-based firm will concentrate at first on the Americas – the Caribbean, Jamaica, and Latin America. Castera says that it is simply a matter of finding the smaller players in these markets and talking to them. As container-on-barge operations become more common in the heartland, on the Mississippi River, in particular, Octopi hopes to gain access into those markets, as well. Castera says simply, "These are all players right now who are having trouble finding a solution in the market."

Today's smaller niche ports and terminals have to dig even harder to find competitive advantages when competing with deep-pocketed megaports intent on dredging to 50 feet and wooing new cargoes. As that effort progresses, there's a kid in town to help.

MARITIME LOGISTICS PROFESSIONAL

2017 EDITORIAL CALENDAR

January/February CRUISE SHIPPING PORTS

Maritime Carriers: Cruise Shipping Logistics
Port Logistics: Cranes, Cargo Handling
Best Practices: 3PL Management
Tech: Software: Terminal & Yard Management
Special Report: Best Global Cruise Port

PVA Maritrends Jan 29-Feb 1, Seattle, WA
Euromaritime Jan 31-Feb 2, Paris, France
Inland Waterways Con. Mar 7-8, Cincinnati, OH
Seatrade Cruise Mar 13-16, Ft. Lauderdale, FL
Breakbulk China Mar 13-16, Shanghai, China
CMA Shipping Mar 20-22, Stamford, CT
Intermodal Asia Mar 21-23, Shanghai, China
Breakbulk Russia Apr 18-20, Moscow, Russia
Gastech Apr 4-7, Tokyo, Japan
Critical Commodities Conf. TBA, New Orleans,LA

March/April IT & SOFTWARE

Maritime Carriers: The Digital Supply Chain
Port Logistics: Terminal Operating Software
Best Practices: Cargo Security
Tech: Cyber & Physical Facility Security
Special Report: Asset Tracking & Management

Breakbulk Europe Apr 24-26, Antwerp, Belgium
SeaAsia Apr 25-27, Singapore
Portsecure May TBA
Inland Marine Expo May 22-24, St. Louis, MO
SIL Jun 6-8, Barcelona, Spain
(Int'l Logistics & Material Handling Exhibition)

May/June BUNKER OPERATIONS & PORTS

Maritime Carriers: Ocean Liner Trades
Port Logistics: Ship & Port Finances
Best Practices: Intermodal: Ship to Rail to Road
Tech: Tank Storage, Cleaning, Maintenance
Special Report: Connecting Ships Ports & People

Norshipping May 30-Jun 2, Oslo, Norway
Marine Money Week Jun 20-22, New York, NY

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July/August PORTS & INFRASTRUCTURE

Maritime Carriers: Top 25 Ocean Carriers
Port Logistics: Gantry Cranes
Best Practices: Port Security
Tech: Lift Trucks
Special Report: Connecting Ships Ports & People

AAPA Oct 1-4, Long Beach, CA
(American Association of Port Authorities)
Breakbulk SE Asia Sep 4-6, Kuala Lumpur, Malaysia
Seatrade Europe Sep 6-8, Hamburg, Germany
NEVA Sep 19-22, St. Petersburg, Russia

September/October CONTAINER PORTS

Maritime Carriers: Managing the New Panamax Tonnage
Port Logistics: Breakbulk
Best Practices: Freight Forwarding: The Ultimate Intermodal Business
Tech: Container Shipping: Port Automation
Special Report: Legal Directory: Ports & Admiralty Attorneys

Shipping Insight Oct TBA
Danish Maritime Days Oct TBA
Air & Sea Cargo Americas Nov 1-3, Miami, FL
Europort Nov 7-10, Rotterdam, Netherlands

November/December GREEN PORTS

Maritime Carriers: LNG Ports Shipping
Port Logistics: LNG Bunkering
Best Practices: LNG Handling Operations
Tech: The Cleanest Terminal Heavy Equipment
Special Report: Renewable Energy

Workboat Show Nov TBA, New Orleans, LA
Interferry TBA Split,Croatia

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C2	Eastern Shipbuilding Group	www.easternshipbuilding.com	(850) 763-1900
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