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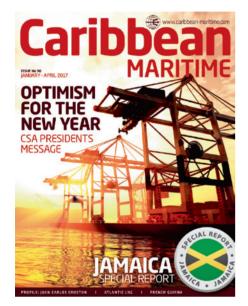
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MISSION STATEMENT

To promote and foster the highest quality service to the maritime industry through training development; working with all agencies, groups and other associations for the benefit and development of its members and the peoples of the Caribbean region.

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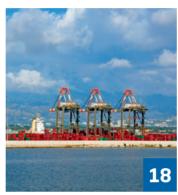
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- The Publisher.

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FROM THE CSA PRESIDENT



REASONS FOR OPTIMISM AFTER A TOUGH YEAR



aving been re-elected to continue serving you as President, kindly allow me to say thanks to the members of the CSA, the General Council, our affiliates and partners for your support and confidence.

I offer you best wishes and hopes for success in 2017 and I look forward to working with you throughout the year to steward the growth and development of our regional shipping industry.

As 2016 ended, many of us ruminated on what was a difficult business year. Demand trends, fierce competition and oversupply of tonnage were among the negative factors affecting the performance of the global shipping industry. We here in the Caribbean were not immune as the level of uncertainty about the future of our sector, and indeed the global economy, took its toll. That uncertainty, as we well know, is related to a variety of industry-specific issues as well as geopolitical factors ranging from the UK referendum on EU membership - so-called Brexit - to the comparative slowdown in the Chinese economy.

Our sector took serious body blows in 2016 characterized by super mergers and the bankruptcy of one global carrier. Container lines suffered from some of the worst conditions the industry has ever endured, largely because of the delivery of brand-new ultralarge vessels at a time when trade growth is low. The huge capacity supply and demand imbalances caused freight rates to drop to record levels and South Korea's Hanjin Shipping Co to collapse in August.

OVERCAPACITY

It seems almost a litany at this point, but it is clear that shipping is in for another hard 12 months, which may continue into ensuing years. In fact, the Boston Consulting Group Inc said in a recent report that the overcapacity that has plaqued shipping firms in recent years would only grow wider in the coming years. They added that shipping capacity would outstrip demand by between 8.2 and 13.8 per cent in 2020 compared with a seven per cent gap today. This is a dire prediction which indicates that the current plunging freight rates

and vanishing profits for marine carriers will only grow worse, particularly on major trade lanes across the Pacific and between Asia and Europe.

Aside from the economic stressors, we will be contending with external regulator changes. This year will require compliance with new regulations in much the same way that the industry

industry, toward the end of 2016 the Moore Stephens Shipping Confidence Survey indicated a sliver of optimism. Confidence among shipping industry stakeholders surveyed worldwide was trending at its highest level for the year, which says much for the resilience of the industry. It illustrates the simple truth that other methods of transpor-

Demand trends, fierce competition and oversupply of tonnage were among the negative factors affecting the performance of the global shipping industry in 2016

grappled with the Verified
Gross Mass Regulations of the
International Maritime Organization last year. The Ballast Water
Management Convention now
stands on the cusp of ratification
on 8 September this year and at
a largely unquantifiable cost to
operators. It will be instructive to
see how shipping deals with the
issue and how prepared we are.

Nonetheless, despite the challenges currently facing the

tation are not a viable alternative to shipping and that innovative operators will always find a way to succeed and survive.

Basil Karatzas, CEO of Karatzas Marine Advisors, when asked about the future of the industry, said: "One thing is for sure – shipping remains a high volatility industry with plenty of opportunities for money to be made. Unfortunately, there are even more opportunities for money to be lost in the short term by following conventional thinking." This resonates with me as it does with many of us, I am sure.

UNCONVENTIONAL

Several other global thought leaders in shipping, when asked to identify what could save our sector, pointed to the advantages of unconventional approaches to how we do business. According to Brian D.W. Kirk, CEO and co-founder of Hive Maritime, the maritime industry is still in the dark ages of computing and needs to embrace modern technology and data analytics to survive.

Olaf Merk, of the Organisation for Economic Co-operation and Development, noted that what can save shipping is

providing more value to clients. "The shipping companies with the happiest clients will be saved and what shipping stakeholders must do is make supply chains as smooth and frictionless as possible," Merk said recently.

Cutting-edge training programs for our maritime professionals can only enhance this approach. In this regard, I am proud to say that the CSA continues to play a pivotal role in the training of the next generation of shipping professionals. Some US\$ 50,000 has been spent per annum on training programs across the region between 2014 and 2016. Over 300 professionals have been trained with the continued support of our partners

and members and we are extremely grateful for this. Of significance is the fact that most of our participants in these programs were from our smaller member states. The CSA's commitment to the education of the region's youth in the field of maritime studies has also led to 16 final-year students of the Caribbean Maritime Institute receiving scholarships valued at US\$ 50,000 from the Monica Silvera Scholarship Foundation over the past two years.

PARTNERSHIP

This year's training offerings will be enhanced by the renewal of our partnership with the Arthur Lok Jack Graduate School of Business under a new MoU that is more

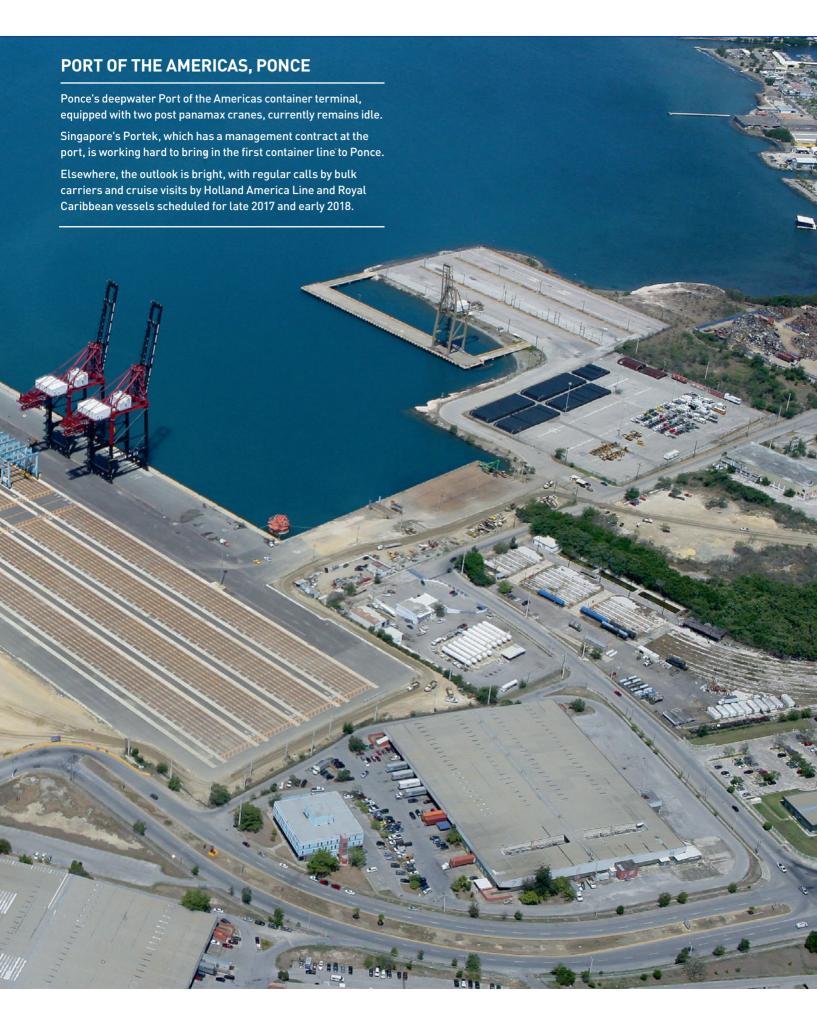
all-encompassing.

This year will not be the easiest of years. We can be sure that it will be uncertain, chaotic, sometimes erratic. But you can be assured that the CSA will continue to strengthen our training program and advocate for members in the lobby for improvements in the legal, competitive and operational framework that defines shipping in this hemisphere. Much of this activity must be mobilized through vibrant and credible national associations.

There is much work to be done, but I am confident in our ability to handle it all. Let us make 2017 a year of missions accomplished. I look forward to seeing you in May at the CSA's Caribbean Shipping Executives' Conference in Curação.









- The CSA's 16th Annual Caribbean Shipping Executives Conference is to be held from 8-10 May in Curação.
- Please contact the CSA Secretariat in Kingston (details below) or visit the CSA website www.caribbeanshipping.org for further details about speakers and to register for this key networking event.
- CSA members enjoy preferential rates. There are also early-bird registration discounts and concessionary hotel rates.







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CSA contributes to Haiti relief effort

ack in October, in the aftermath of the devastating Hurricane Matthew, the Caribbean Shipping Association President, David Jean-Marie, made a pledge on behalf of the CSA to assist the people of Haiti.

This pledge took the form of a US\$ 10,000 donation to the people of Haiti along with a call for all CSA members and associates to contribute in some way towards alleviating a disaster that is thought to have killed nearly 900 Haitians and leaving a further 1.4 million in need of humanitarian assistance.

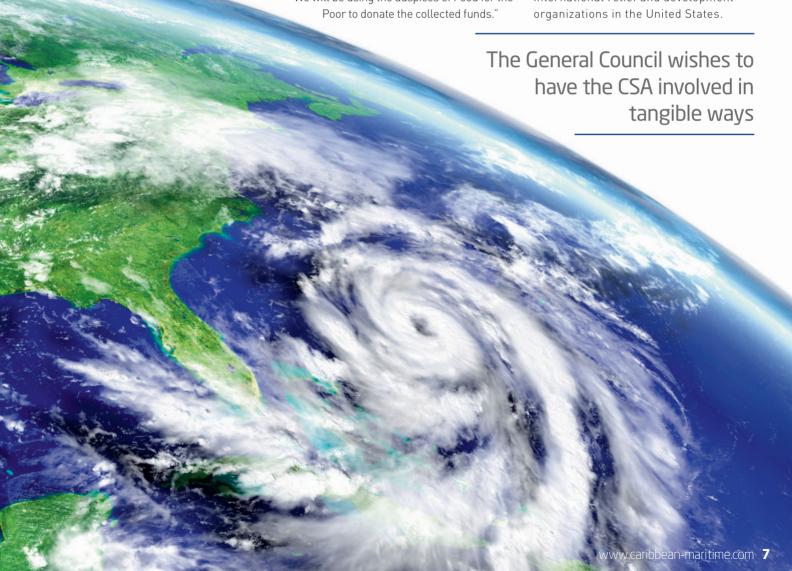
At the time, Mr Jean-Marie said: "There is a need for urgent humanitarian assistance to Haiti, given the level of destruction. In

addition to the efforts we may be making individually or through our companies and countries, the General Council wishes to have the CSA involved in tangible ways. We have therefore commenced a drive to raise funds by pledging an initial US\$ 10,000, and we invite all our members and associates to contribute through the Secretariat."

CHARITY

Mr Jean-Marie said subsequently:
"We are calling on you, our
members, to help by contributing through
this medium. By clicking on Contribute to
Haiti Here you too will be doing your part.
We will be using the auspices of Food for the
Poor to donate the collected funds."

Food for the Poor (www.foodforthepoor. org) is a charity based in Coconut Creek, Florida, and is one of the largest international relief and development organizations in the United States.





Q: Where were you born, where did you go to school and what did your parents do for a living?

A: I was born in Panama City, Panama, and attended a private school, also in Panama. I grew up as an only child with my Mom, who is a nurse and still practices after 40-plus years. My Dad is a doctor.

Q: In terms of higher education, where did you attend university or college and what did you major in?

A: I've always liked numbers, so I knew that I would pursue some kind of engineering degree coming out of school. But it was my Mom who told me that I should check out the engineering programs at the Nautical School in Panama. It was the early 1990s and there were big hopes in the maritime industry because of the recently started port privatization process and the upcoming canal handover to the Panamanian government by the turn of the decade. So I enrolled in the Nautical School and pursued a degree in nautical engineering, with specialization in maritime transport and navigation. After four years of studies and a year of sailing on container vessels with Evergreen Marine, I got my degree. Coming back home, I got in contact with the first of a number of people

I started at MIT in March 2004 as a vard planner. I'm now vice president, marketing and corporate affairs

I call my mentors: people who have guided me throughout my professional life and whose advice has been invaluable. So, this first mentor, a Colombian called Aldemar Suárez, told me I should pursue a master's degree in Sweden - Sweden! But, I followed his advice and worked throughout the World Maritime University application process. including scholarship funding – there was no way my Mom could have afforded scholarship there. It was a great experience going there, with people from over 40 countries and lectures about all maritime activities. After 17 months I received an M.Sc. degree in maritime affairs with emphasis on port management. And then flew back home.

Q: After finishing your education, what was your first job?

A: I had crazy ideas about compensation packages when coming back to Panama master's degree from Sweden! port administration! - but quickly came back to earth. It was October 2001, right after 9/11. Very few interview offers. So I took the only one offered and started working for a trading company.

Q: How did you become involved with MIT and what's your present role there?

A: My ticket into MIT came via another mentor, Maria Dixon, I met her during my WMU stint and she introduced me to senior MIT directors during a TOC conference in Panama back in November 2003. I emailed one of the MIT directors, Stacy Hatfield – then ops manager and now MIT general manager – so many times that I guess he thought it would be better to let me go to MIT for an interview and get rid of all those emails. I started at MIT

in March 2004 as a yard planner. I'm now vice president, marketing and corporate affairs.

Q: What has been your best decision since you joined MIT and do you have regrets about any past decision?

A: Before joining MIT I sent resumés left and right looking for job opportunities. So it came as no surprise that after I got hired at MIT I started getting calls with job offers. One of the calls involved a good position in Panama City with a 30 per cent salary increase and weekends off. Remember that I was working shifts then at MIT, so it was a very tempting offer. But another mentor told me to stay put at MIT: "After so much you went through to get a job at MIT, you're gonna quit?" I think it's the best decision I've taken: sticking to what I like the most. I don't regret any decision taken while here, but I've made tons of ones that, looking back, can be improved upon.

Q: What impact is last year's enlargement of the Panama Canal having on MIT's operations?

A: MIT is currently receiving seven neopanamax (NPx) cranes a week. We were ready since end of 2015, both equipment and infrastructure-wise, for the big vessels. The key is continuous operational improvement, especially in a transshipment terminal this size, with daily changes in service arrival, cargo information and priorities and so on. Now, with the NPx deployment, the new alliances finally in place by April 2017 and the ongoing M&A activity among ocean carriers, we expect some gradual volume realignment in the Caribbean.





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PROFILE **IUAN CARLOS CROSTON**

Q: How did you view MIT's performance in calendar 2016 and what are MIT's forecasts for this year?

A: MIT finished 2016 with 1,831,596 teu, down 7.3 per cent from 2015. The economic performance in Latin America, especially Brazil, Colombia and Venezuela, greatly impacted transshipment volumes in the region. We forecast 2017 at about the same 2016 level, but there could be some volatility based on the financial situation and activity of major carriers.

Q: I believe MIT eventually aims to handle 4 million teu annually. When do you expect to hit this target?

A: Our capacity right now is 3.5 million teu annually. With some equipment and infrastructure improvement, we could reach 4 million teu capacity-wise. Our forecast is to reach that volume mid to end 2020s.

Q: How would you describe the relationship between MIT and the Colon Free Zone and how important is the CFZ to the success of MIT?

A: Although local cargo volume represents about 15 per cent of MIT's overall throughput, it's still a vital component of our business activity. The Colon Free Zone performance is a strong driver of local cargo volumes in Panama and we look forward to improvement in its economic activity. Moreover, Colombia and Venezuela are its two biggest markets, so any improvement in the economic performance of those countries will bring additional benefits.

Q: In October 2015 in Cartagena you were elected as vice president of the CSA for a three-year term. What was your reaction?

A: MIT has been part of the Caribbean Shipping Association for the last 20+ years. I became actively involved in 2005 and even today I'm amazed by what I call the "CSA way". When I was nominated as VP in Cartagena, I was humbled by the opportunity presented and felt a huge responsibility to carry the CSA way forward. We have a strong leader in our President David Jean-Marie and my intention is to be able to implement his vision for the CSA during my tenure as VP.

For me, the CSA way represents "innovative traditions" and taking care of people. By

innovative traditions we mean that the CSA carries a huge historical presence in the region, while adapting to an ever-changing landscape. We must not forget where we come from in order to move ahead. The CSA also believes that we must take care of the human element in every transaction. Just look at what we have been able to do as a regional leader on training initiatives. As a living example of the impact of good mentors, I believe this role needs to grow within and beyond the CSA.

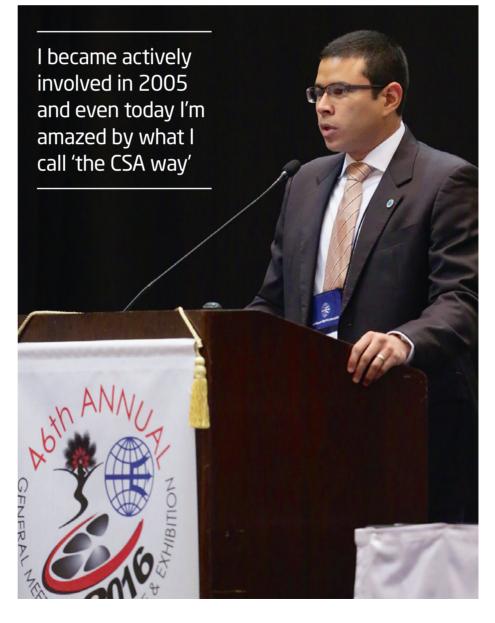
Q: Outside of work, how do you relax and do you have any hobbies or watch or play any sport?

A: I like to read and spend time with

family. I have four kids, three of them small, so investing - not spending - time at home is a hobby by itself. I also like to watch sports, especially American football. Just the other night I had the chance to watch one of the greatest championship games in a long time: University of Alabama v. Clemson.

Q: If you had to choose just one Caribbean island for a vacation, which one would you choose and why?

A: Thinking of a single spot for a Caribbean vacation. I can honestly say that each Caribbean island has its own flavor. Think of it: four different languages spoken in 40 different territories by 40 million people. Let's book an island each year!

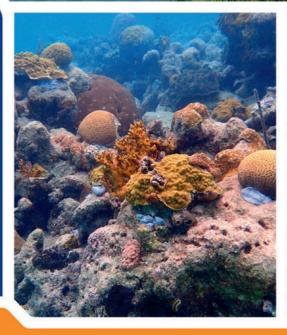






For decades, Van Oord has been working on dredging and marine engineering projects in the Caribbean, working closely with clients and partners while showing respect for each other and the environment. The multi-disciplinary project Sandy Bottom, carried out in the Bahamas, is a proven example of this sustainable mindset.

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AN ECONOMIC TOWER OF STRENGTH FOR TRINIDAD & TOBAGO

tlantic LNG is one of the main pillars of the Trinidad and Tobago economy. The company was established in 1995 and is among the world's largest exporters of liquefied natural gas (LNG).

The company produces LNG from a four-train liquefaction facility at Point Fortin.
Each train is ultimately owned by a holding company, comprising its own group of member companies (see panel, right).

At Point Fortin, Atlantic LNG has two jetties of 700 meters in length. Each jetty can accommodate an LNG carrier of up to

145,000 cubic meters capacity. The facility is able to produce up to 100,000 cubic meters of LNG per day, which is shipped to contracted customers in South America, Asia and Spain. The plant also produces natural gas liquid (NGL) products such as ethane and propane.

OPPORTUNITIES

Last year's enlargement of the Panama Canal opened up new opportunities for the company. In July, a first shipment from Trinidad to Mexico's west coast was made in a 138,000 cubic meter LNG carrier. Previ-

ously, only vessels of about 90,000 cubic meters were able to transit the waterway. These economies of scale are reducing transport costs for Atlantic. Chief executive Nigel Darlow told Caribbean

Maritime: "The enlarged Panama Canal now allows access for conventional-sized LNG ships, providing good optionality for LNG trading in both the Atlantic and Pacific basins. Previously, only about eight per cent of the worldwide LNG fleet could transit the Panama Canal, but the expansion now accommodates in excess of 90 per cent of LNG carriers."

WHO OWNS ATLANTIC LNG?

Atlantic LNG is owned by the United States oil giant Amoco with 34 per cent; British firm BG with 26 per cent; Madridbased Repsol with 20 per cent; as well as the US's Cabot Corporation and the National Gas Company of Trinidad and Tobago, each with 10 per cent.

Last year's enlargement of the Panama Canal opened up new opportunities for the company





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ATLANTIC LNG

Mr Darlow added: "This means that Atlantic basin LNG producers like Trinidad and Tobago can gain improved access to the Asian market. Of course, there are other variables such as prevailing market prices, destination arbitrage and the level of derived savings in fuel, tariffs and time which will factor into determining the routes chosen by LNG buyers and fleet owners."

ALIGNED

But some concern has been expressed about Point Fortin and whether it is now fully aligned with the canal. Mr Darlow was quick to dispel this misconception: "The larger vessels of up to 180,000 cubic meters that can now utilize the expanded Panama Canal can be accommodated at Atlantic's terminal. In fact, Point Fortin has already accommodated LNG carriers with a capacity of up to 210,000 cubic metres [Q-Flex], and has done so on several occasions. However, the charted depth of our channel is 13.0 meters and vessels are not allowed to depart with a draft deeper than 11.5 meters. Therefore, we are not able to load these larger vessels to their maximum capacity to ensure the ship draft does not exceed our terminal's stated specifications. At this time, Atlantic is not exploring any further capital dredging to bring in tankers with deeper draft."

There are worries, too, about the volatility of global LNG prices, which had steadily eased in recent years but picked up again in the second half of 2017. "Global LNG prices have declined significantly in the last few years, not just in Asia. Despite this fall, Atlantic remains competitive under the current market conditions and also has considerable flexibility in its cargo destinations."

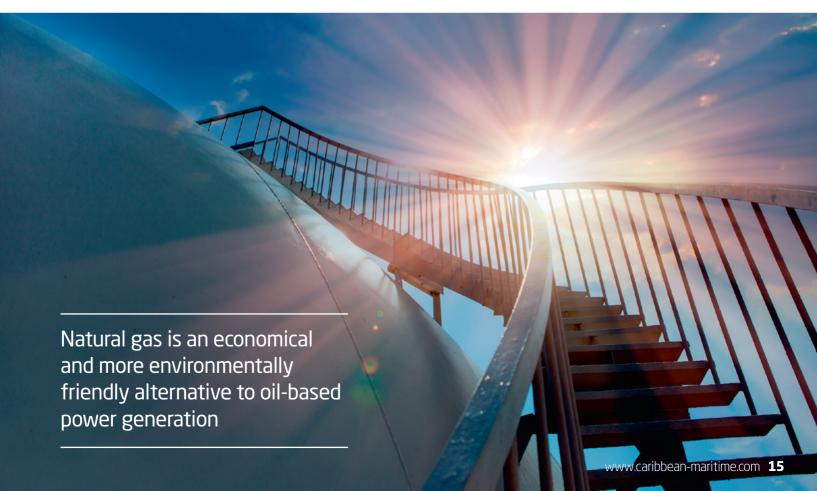
In the Caribbean, the Dominican Republic, Puerto Rico, Barbados and Jamaica are already importing LNG. As Mr Darlow said: "Natural gas is an economical and more environmentally friendly alternative to oil-based power generation. And this may be a consideration for any country looking to utilize natural gas for power generation. Natural gas is increasingly the fossil fuel of choice, being much cleaner than coal and oil. This growth in the relative importance of gas in the energy mix will continue to support global LNG demand."

All good news, it seems, for Atlantic LNG.

A CATALYST FOR GROWTH

Atlantic LNG is not just an energy producer but also a catalyst for the continued growth and development of the local economy. For example, Atlantic has about 700 full-time employees (99 per cent of whom are T&T nationals) and engages some 1,000 local contractors who provide about two-thirds of the goods and services procured by the company.

Furthermore, Atlantic offers extensive local training programs and comprehensive social investment initiatives which engage some 20,000 individuals and over 300 schools on an annual basis. So Atlantic's contribution to the local economy extends well beyond its revenue contribution from LNG production.





UNDERSTANDING LATEST TRENDS IS KEY TO EFFECTIVE MARITIME TRAINING

n this ever-evolving world, change is omnipresent and constant: change in climate, in leadership, in policies, in culture, in recruits, in technology, in communication. Change affects what you do, how you do it and whom you do it with.

This, in turn, puts additional pressure on us as maritime professionals to keep up with change, let alone get ahead of it. It is cumbersome and challenging to keep up with the latest and greatest (the incoming tide) and to recognize what is yesterday's tactic, technique or procedure (the outgoing tide).

Here, we'll look at how training (applicable for security, safety, stevedoring, operations, environmental response, effectively all specialized jobs in the maritime field) has evolved in general, what are some of the current challenges in the maritime environment, and then focus on recommendations for our 'fluid' workplace. It's all about what

could help you, your area of responsibility and the professional community as we try to keep up with the shifting tides around us.

We know that the evolving environment, increasing complexity, differences in culture, advancing tools and technology, and the outcomes of those changes - morale issues, mishaps, mission failures, public/customer dissatisfaction, etc - require us to look at our training and see where we can close the gap (or respond to the incoming tide).

Minimal training needed to complete certification for port facility security officers or vessel/ship security officers could be a mere 16 hours, depending on the course provider. For comparison, to become a licensed barber in the State of Florida one must attend a barber school and successfully complete a minimum of 1,200 hours of training. Are your personnel, most critical to your daily operation, either trained to the minimum



Bv Mark R. DuPont O.C.E.A.N.S. LLC

or trained enough to respond effectively to whatever situation comes their way?

DEVELOPING A TRAINING SOLUTION: THE TIDE PROCESS

The reference to tides in earlier paragraphs was intentional. Not only does a tide represent change, but TIDE as an acronym represents how to develop a training solution, accomplished in four easy steps:

T = TAKE A BREAK, TAKE NOTE, TAKE CHARGE

Sometimes we get so caught up in what is going on around us that it's hard to see what's coming or going. So try to step back and take a break. Step away from the clutter and confusion and take note of what is going on, what your challenges are and what you have at hand. Take note of what changes are starting to have an effect on you or your agency. Take note of the challenges as well as the resources that you have working on your side working for you. Sometimes we lose sight of what's right in front of us and what is often our most important assets. How are your training staff and are they able to keep up with the changes and challenges? Once you've taken a breath and looked around, step forward and take charge of the issue. Don't let a performance gap or problem fester. You have an obligation to your people, your agency and to the people you serve to make sure you and your fellow officers are properly prepared. Make it happen.

I = IDENTIFY THE TRAINING NEED

What is it that you have to change or what change do you have to react to? Is it a new piece of equipment, a new technology, a new platform that you will be operating? Is it the fact that your maritime training has diminished over the years and you need to revitalize it? Identify the problem or performance gap through a thorough needs assessment and analysis. Identify potential solutions to the problem. Make sure you articulate how this solution closes the performance gap or effects the change that you want it to. People making decisions - or questioning your decisions - always like it when you have the proven data and process to prove the validity of your steps and your proposed solution. Identify the resources that you have to address this issue, either internally or outside your organization. Influence the change through your people and your superiors. If you've carried out a good needs assessment and identified the proper resources and course of action, you can start influencing change.

D = DECIDE

Decide to change what you are doing or not doing. Decide on the solution that will rectify your performance gap. If you can't make it happen immediately due to budget or other constraints. decide on an action that will mitigate the risk over time or gradually. Decide on the standards that you will implement or follow. In our world of commercial shipping, we understand the need for standards. They help ensure that we do our jobs in an effective and efficient manner that is recognized by others. This helps

others. This helps protect our people, our organization and our nation. Implementing or adopting a corporate, regional or national standard can also eliminate the guesswork of training.

E = EXECUTE AND EVALUATE

Execute the training plan. And once it gets going, evaluate.
Check to make sure it is bringing about the change that you wanted it to. Is the performance gap being corrected? Are we now training to a national standard that mitigates our risks?

Look at the TIDE, note what state of the TIDE you're in, if it's incoming or outgoing, and remember that what you do will make a difference on the water.



It's all about what could help you, your area of responsibility and the professional community as we try to keep up with the shifting tides around us



Caribbean Special Report AMAICA

Jamaica is on the up and up. In this special report, Caribbean Maritime sets out to highlight the many positive developments that are taking place throughout the island and across a range of maritime sectors.

What's more, the island's logistics hub ambitions have begun to materialize as Jamaica highlights its central Caribbean location and builds on its long-standing advantages – highly developed local shipping expertise together with a skilled and educated workforce.

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JAMAICA INTRODUCTION

Maritime sector widens its horizons

hese are exciting times for Jamaica. After many years of sluggish development, missed opportunities, political upheavals and the feeling among many Jamaicans that better opportunities lay elsewhere, there is now a real sense of optimism.

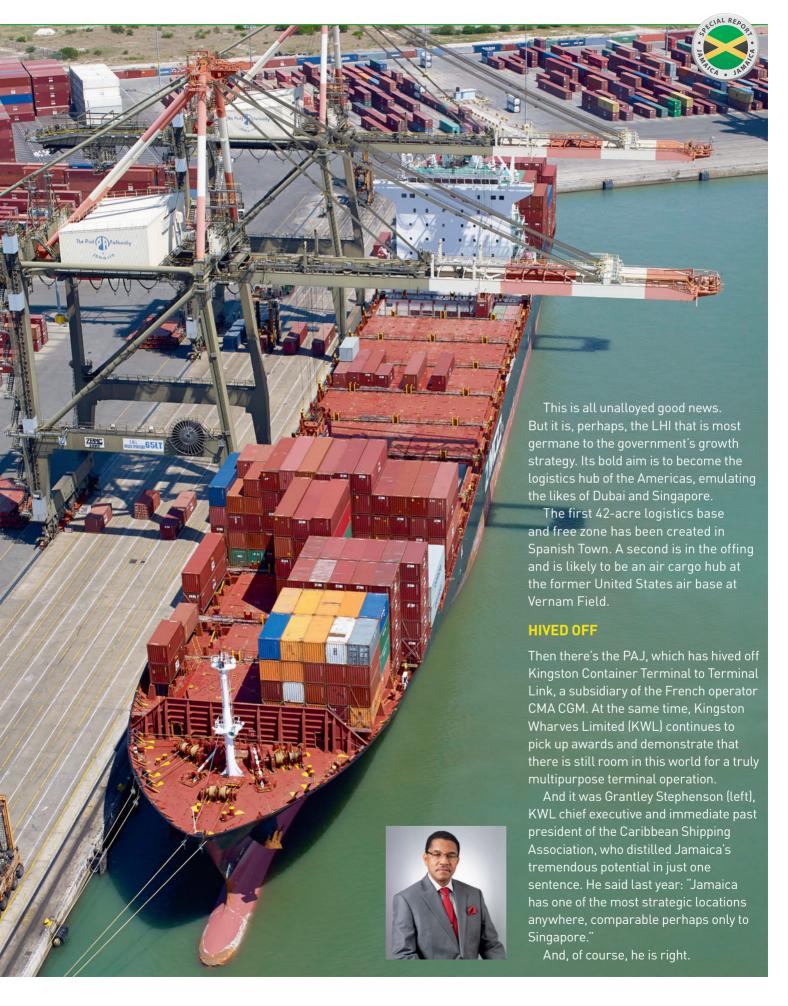
This is particularly true in the maritime sector, where Jamaica really has got its skates on lately. The government has given its backing to a Logistics Hub Initiative (LHI) and the island is fully capitalizing on its natural advantages in terms of its location, with new benefits accruing from the enlarged Panama Canal.

Across the maritime sector there seems to be a positive story to tell:

- Jamaica enjoyed a record number of cruise passengers in 2016
- Bunker sales are on the up
- The Port Authority of Jamaica (PAJ) is upgrading secondary facilities
- A new shipyard is planned for Kingston
- Sites for logistics hubs have been identified
- The first liquefied natural gas (LNG) shipment has arrived and work on a new gas terminal is under way
- The ship registry continues to grow in stature
- Alumina exports have resumed from some ports.



SECIAL REPOR



Kingston gears up for new Panama traffic

he Port of Kingston is being expanded and upgraded as it battles with other Caribbean hubs and would-be hubs for a share of the additional trade and larger ships being generated by the newly expanded Panama Canal.

Mariel, Caucedo and perhaps eventually Ponce may also want a slice of this business, but Kingston is determined to be the region's pre-eminent port, with the capacity and draft to handle neopanamax vessels (Kingston is currently the seventhlargest gateway in the Caribbean and Latin America*).

CONCESSION

A major step in this direction came with the concession in 2015 of Kingston Container Terminal to Kingston Freeport Terminal Ltd (KFTL), part of the CMA CGM subsidiary Terminal Link, under the terms of a 30-year design, build, operate, transfer (DBOT) finance concession.

Under the scheme, KFTL is duty bound to deepen the port's navigation channel to provide access to vessels of up to 14.2 meters draft, to broaden its turning circle and to upgrade some of the 1,200 meters of quay. Moreover, the operator is expanding KCT's annual throughput capacity from 2.8 million to 3.2 million teu. The dredging and quay upgrading contract was won by the French company VINCI Construction Grand Projets working alongside Belgium's Jan De Nul.

The program is expected to cost US\$ 452 million – funded mostly by loans from the Inter-American Investment Corporation (IIC). Meanwhile, the Inter-American Development Bank (IDB) said: "The project will contribute to strengthen Jamaican's relevancy in global trade and foster private sector activity and foreign direct investment." This and the knowledge that Kingston is tied in long-term to CMA CGM's worldwide liner network, with its strong emphasis on Caribbean and Latin American markets, gives the port a secure base for the expansion. CMA CGM is also able to lend its experience and expertise to improvements elsewhere, such as the recent introduction of a new port community system by the French firm SOGET.

KFTL is duty bound to deepen the port's navigation channel to provide access to vessels of up to 14.2 meters draft, to broaden its turning circle and to upgrade some of the 1,200 meters of quay

*According to the Economic Commission for

Latin America and the Caribbean



KWL moves up to a higher gear

f there is one port that is set to gain from the enlargement of the Panama Canal then it is Kingston. And if there is one cargo handler that has been quick off the mark to capitalise on Jamaica's perfect location, that company is Kingston Wharves Limited (KWL).

KWL is without question the Caribbean's leading multipurpose operator - an accolade bestowed on the company no less than five times in the past nine years. The stevedore offers 1,655 meters of continuous quay in Kingston comprising nine berths. And, to achieve and maintain its pre-eminent and award-winning position, KWL has spent over US\$ 30 million in the past four years on upgrading its infrastructure, expanding its footprint at the port and buying new cargo handling equipment. In fact, the latest piece

in this jigsaw arrived in October when KWL took delivery of an LHM 600 mobile harbor crane – thought to be the biggest of its type in the Caribbean - from German manufacturer Liebherr.

And KWL is not stopping there. It plans to spend US\$ 15 million on a 15,050 square meter logistics complex, due for completion in May. Work is under way to clear space at the site, with a number of warehouses being demolished. The facility is being built by China's BYD Construction. This logistics complex will specialize in handling precleared barrels of personal effects that are

shipped to the island regularly by members of the Jamaican diaspora.



cruise ship as it received the Pullmantur Cruise Line vessel, with over 2,600 passengers, at a hastily prepared Berth 2.

REGIONAL HUB

KWL started handling cars for transshipment about five years

ago and now Kingston is a regional hub for vehicles bound for 23 destinations in Central America and the Caribbean. Norway's Höegh Autoliners is a major customer in this respect.

As an example of the sheer multipurpose nature of its operation, KWL now has grain silos and is receiving imports of cereals. The company also handles lumber, steel, sulfuric acid and cooking oil - in fact, in the words of chief executive Grantley Stephenson, "just about anything".

And as if that weren't enough, KWL saw a further development in 2016 with the berthing of 'Monarch of the Seas', the first cruise ship to call at Kingston for three years. Unfortunately, this was an

ad hoc diversionary call rather than one scheduled by itinerary planners. But it did highlight the attractiveness of Kingston as a cruise call and underlined KWL's ability to handle a large

KWL is without question the Caribbean's leading multipurpose operator - an accolade bestowed on the company no less than five times in the past nine years

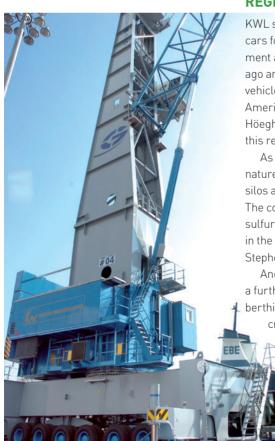
BAUXITE SHIPMENTS RESUME AT PORT KAISER

Port Kaiser witnessed its first shipment of bauxite for some time in 2016 as mining operations resumed early in the year at nearby Nain, in the southwest of Jamaica.

The bauxite mine and alumina plant, Jamaica's largest, had been closed since 2009 but had been reopened by its Russian owner, UC Rusal Alpart.

Nain has an annual capacity of 1.67 million tonnes of alumina and 4.9 million tonnes of bauxite.

The reopening of Nain and the shipment from Port Kaiser were part of a welcome upturn in bauxite and alumina exports from various points around Jamaica such as Rocky Point, Port Rhoades and Port Esquivel.







Cruise sector raises its game

amaica's success as a cruise destination seems to go from strength to strength. Some of this is due to the island's convenient location - a perfect call for seven-night trips from South Florida.

By the end of 2016 some 1.66 million cruise passengers had called at Jamaican previous 12 months - an increase of 6.3 per cent. William Tatham, vice president cruise shipping at the Port Authority of Jamaica (PAJ), told Caribbean Maritime this was a

Even so, Jamaica is still some way behind The Bahamas, Cozumel, the US

Historic Falmouth is Jamaica's ace card and one that Royal Caribbean Cruises has fully supported since the PAJ first suggested that the old port, just 25 km east of Montego Bay, could be restored along with the best preserved of the region's Georgian towns. This support for Falmouth was clearly borne out late last year when the world's largest cruise ship, Royal Caribbean's 'Harmony of the Seas'. with some 6,400 passengers and 2,150 crew, made its first call.



success of Falmouth and Ocho Rios, with their improved facilities and unique attractions, had left the previous top stop, Montego Bay, in their wake. But the PAJ to spend about US\$ 100 million over the



next 18 months to transform the port into a world-class multipurpose point of entry.

What's more, Montego Bay has a trump card to play and this is home-porting. Sangster International Airport, just down the road, already has scheduled connections to North America and Europe. According to William Tatham, seven cruise ships have chosen to home-port this season.

Montego Bay is poised to provide an even more attractive base for cruises originating in Jamaica; and the homeporting concept will be central to the port's ongoing redevelopment.

MONTEGO BAY EXPANSION GETS UNDER WAY

An expansion of the port of Montego Bay has been given the green light.

Up until late last year, the go-ahead for the master plan at Montego Bay had been subject to delay and the scheme was in some doubt.

However, Professor Gordon Shirley, chairman of the Port Authority of Jamaica (PAJ), has now confirmed that the scheme will move forward in 2017.

The plan is to create two dedicated cruise berths and construct new cruise terminal buildings to make Montego Bay even more attractive as a home-port, improve the ground transportation staging areas, enhance the container freight station, provide for wet berth repairs, add better lighting and install more reefer points.

A new container and bulk cargo berth will be built, and so will a new fuel berth and storage area.

Another key project at Montego Bay is the construction of an LNG terminal for the United States company New Fortress Energy. This will supply fuel to the nearby Bogue power plant. It was the comparatively late inclusion of this new reception and storage terminal that had delayed the wider development of the port.

It is hoped that the terminal will also be used to supply LNG to visiting cruise ships.



Major upgrade for Ocho Rios

he Port Authority of Jamaica (PAJ) is spending US\$ 20 million to upgrade Fisherman's Beach in Ocho Rios.

This is an area between the existing single-berth cruise pier and the multipurpose Reynolds Pier originally built for the export of bauxite.

Reynolds Pier will be improved to serve both the general cargo and cruise ship sectors. Sugar and limestone are exported from the facility. Nevertheless, the sugar loaders will be dismantled so that cruise ships with externally protruding lifeboats can berth.

As things currently stand, Reynolds Pier is pressed into service when more than one cruise ship calls at Ocho Rios. But the

facility is not entirely suitable for this purpose - hence the need to redevelop the area between the town and the pier.

The work will create more space for ground transportation at Reynolds Pier while Fisherman's Beach will become a fishing

village attraction. The PAJ envisages the area resembling Historic Falmouth in terms of its ambience and attractiveness to visitors.

The need to make Ocho Rios more attrac-



tive to cruise passengers is clear. Despite its close proximity to Dunn River Falls, Ocho Rios has seen a dramatic drop in the number of cruise passengers visiting the port from about 800,000 to only 400,000 passengers per year.

Reynolds Pier will be improved to serve both the general cargo and cruise ship sectors





First step towards full shiprepair center

amaica's ambitions to become a key maritime center took a step in the right direction in November when plans were announced for the creation of German Ship Repair Jamaica (GSRJ), a new shiprepair facility in Kingston.

To start with, GSRJ will deal only with straightforward mobile repairs, but the long-term aim is to build a whole shipyard. It is hoped that these initial wet repairs will allow the new facility to gain the confidence of ship operators while at the same time honing the skills of local workers and technicians as the size and complexity of contracts increase.

CONNECTED

Those behind the scheme believe the proposed dockyard will form an essential part of an effective and highly connected maritime environment that will provide all the services demanded by the industry in one location. The project has the full support

EXISTING FACILITY

Until now, the only local repair facility has been Kingston Dry Dock, operated by Jamaica Fruit & Shipping, which is restricted to vessels of about 100 tonnes. of the Jamaican government and this was evident at the launch event, which was attended by ministers and top local officials.

The aim of the prospective dockyard is to capture business that is local to Jamaica - such as coastal patrol vessels and other government agency-operated craft, together with commercial vessels - as well as other ships calling Jamaica.

As it is, the Port of Kingston receives over 2,000 calls per year by some 400 different ships. Many of these vessels are in

need of urgent - mostly minor - repairs and at the same time have to use the full services of a dockyard at least every five years to meet standards of international certification. In this regard, GSRJ hopes to attract business from those owners who currently go to yards in the United States. The Bahamas or Curação for minor and major repairs and certification.

The Kingston-based Caribbean Maritime Institute, which already runs shiprepair-related courses, is fully supportive of the yard's formation and will no doubt be a ready source of skilled employees.

German Ship Repair Jamaica is owned by H&P Caribbean Maritime Services Ltd (part of Harren & Partners), Jamaica Dry Dock Ltd and Germany's Kloska Technik.

Harren & Partners is already deeply committed to the region via its ownership of Caribbean Feeder Services, based in Florida, which moves about 300.000 teu each year annually and operates some 13 vessels.

Phase two will involve the installation of a floating dock and associated onshore workshops. The proposed floating dock is expected to accommodate vessels of 150 to 200 meters in length.

The aim of the prospective dockyard is to capture business that is local to lamaica





s mentioned in previous issues of Caribbean Maritime, the region's liguefied natural gas (LNG) market is poised for rapid change as many island economies ponder an expensive switch from traditional energy sources to cleaner and less pricey alternatives.

last August, but subsequent deliveries have gone directly to Montego Bay.

This followed an agreement with the US company New Fortress Energy to supply the 115 MW Boque power plant at St James near Montego Bay. Earlier in early 2016 the plant was retrofitted at a cost of US\$

> 22.7 million to run on clean LNG in addition to dirtier automotive diesel oil (ADO). The plant, which provides about 20 per cent of the island's daily needs, is operated

by the local energy provider Jamaica Public Service Company (JPS).

Jamaica's first shipment of United Statessourced LNG arrived at Kingston last August, but subsequent deliveries have gone directly to Montego Bay

Alongside Puerto Rico and the Dominican Republic, Jamaica has been at the forefront of fuel diversification. It has already committed millions of dollars to convert existing energy generation capacity to LNG and plans to spend even more on constructing new gas plants.

Jamaica's first shipment of United States-sourced LNG arrived at Kingston

RECEPTION

The new LNG reception facility forms part of a wider development of the Port of Montego Bay (see separate article), where the gas is being unloaded and converted prior to use at Bogue. There is also the

possibility of supplying LNG to homeporting cruise ships.

Gas imports are being handled by Bermuda-based Golar LNG, which is using the 138,500 cubic meter capacity 'Golar Arctic' as a floating storage unit at Montego Bay for this purpose.

Speaking at the launch delivery, Kelly Tomblin, president and chief executive of JPS, said: "Natural gas will play a key role in transforming the energy sector, while supporting industrial development and economic growth. We are definitely on the threshold of great things for Jamaica and the region."

And since Ms Tomblin's comments, JPS and Fortress Energy have signed a further agreement to supply LNG to a new US\$ 210 million plant of 190 MW capacity now under construction at Old Harbour Bay, St Catherine. And a new LNG terminal and regasification platform will be built on the west side of Portland Bight (not far from alumina export facility at Port Esquivel) to receive these shipments. The plant and terminal should be complete by the second quarter of 2018.



Bunkering leads way in key services

key feature of Jamaica's drive to be a major maritime center is the supply of bunkers – not only for vessels calling Jamaican ports but also for those in transit across the Caribbean.

And bunker supply is already making a positive contribution to the nation's economy. The market is competitive locally and

Jamaica has three suppliers: Aegean Marine Petroleum Network, Petrotech

HAND

Marine and West Indies Petroleum (WIP). Jamaica also faces stiff competition from

> Panama. where

some 20 suppliers are based.

As the world's largest independent bunker supplier, the publicly quoted company Aegean Marine Petroleum has two barges based in Jamaica and supplies fuel to vessels in Kingston, Ocho Rios and Montego Bay

The Nevis-registered company Petrotech Marine operates as Petrotec Bunkering (JA) in the local market. Using a doublehull barge of 4,738 cubic meters capacity, Petrotec Bunkering mainly serves Kingston, but the barge is available to supply fuel at all ports around the island. In particular, there are plans to supply cruise vessels and other potential north coast customers. Furthermore, a third bunker barge will be added to the Petrotec fleet to bolster operations in Kingston.

The most recent entrant to the local market is WIP, which owns and operates

Locally owned WIP has bases in Port Esquivel (a tank farm acquired in mid 2016 from Jamaica Broilers Group) in the south and Ocho Rios in the north. The company has two tug/barge units stationed in Kingston and supplies about 200 vessels a year, but is planning to increase capacity. WIP supplies various grades of heavy fuel oil (HFO) as well as marine gas oil (MGO) and ultra low sulfur diesel (ULSD).

In fact, Jamaica is regionally competitive in terms of its pricing of IFO 180 intermediate fuel oil and MGO, but not necessarily so for other grades.

A recent study has suggested that bunker volumes will hit 1.9 million tonnes per annum by 2025, but only if the government introduces the necessary legal and administrative framework. By comparison, only 220,000 tonnes of fuel was supplied in 2012.

Further down the track, there is the possibility of liquefied natural gas (LNG) bunkering at Montego Bay. This comes as more cruise ship operators opt for LNGpowered vessels (either new or retrofitted) and as a new gas terminal takes shape at the port in association with the United States' New Fortress Energy project.

Bunkering is a key element of the Logistics Hub initiative being promoted by the



Familiar name is core logistics provider

idely held Jamaica Producers Group (JP) is part of Jamaica's history and its familiar yellowand-green logo is part of the everyday life of many Jamaicans, at home and abroad.

But behind the history and the otherwise low-ish profile is a highly successful business - one at the very heart of Jamaica's maritime and freight sectors.

Its long pedigree disguises a diversified, modern operation. In fact, JP is much more than a freight operator; earning over half its income from food and drink products rather than being concerned only with shipping and logistics.

Yet as part of its shipping and logistics division, JP is a key shareholder in Kingston Wharves Limited (KWL) and has upped its stake in the multipurpose terminal operator over recent years. Chief executive Jeffrey Hall said KWL was treated, for accounting purposes, as a subsidiary of JP; but he added: "JP is satisfied with its current holdings of KWL and has no plans to reduce or increase its shareholding."

The company has performed well in

recent times. JP enjoyed a solid performance in 2016 with a particularly strong result in its shipping and logistics businesses. Mr Hall told Caribbean Maritime: "Our logistics business will continue to grow and diversify and now includes warehousing, port terminal operations, shipping and maritime security."

LOGISTICS

Beyond Jamaica, JP Shipping Services is at the heart of the logistics division and was initially established to serve the needs of

IP is much more than a freight operator, earning over half its income from food and drink products rather than being concerned only with shipping and logistics



the Jamaican banana industry for shipping and logistical support within the United Kingdom. Over the years it has used this experience to develop and expand its activities in the UK.

Moreover, with more than 20,000 customers making use of its forwarding and packing services worldwide, JP is the leading import and export company to and from the Caribbean and the rest of the world.

As well as providing businesses with reliable UK import and export freight forwarding services, JP serves individuals who are looking to relocate or move personal effects. In addition, JP offers packaging services that include barrels, drums and cartons along with comprehensive marine insurance.

Since buying the UK company in 2008, JP's trading division, London-based JP RAM Shipping, has been serving the general public to and from the Caribbean, specializing in the movement of personal effects. Using its own fleet of vehicles in the UK, this full-service operation even delivers drums and barrels to homes for collection at a later date; or drivers can wait while packing takes place. In addition, JP RAM offers a worldwide personal effects service.

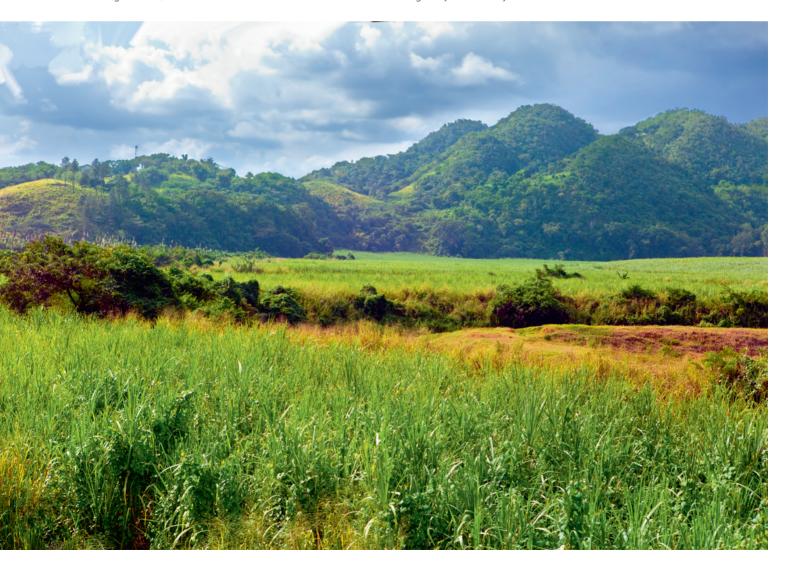
INBOUND

In general, though, inbound cargo consists mainly of motor vehicles and machinery and equipment, while outbound cargo is mostly food and drink products on behalf of leading Caribbean companies.

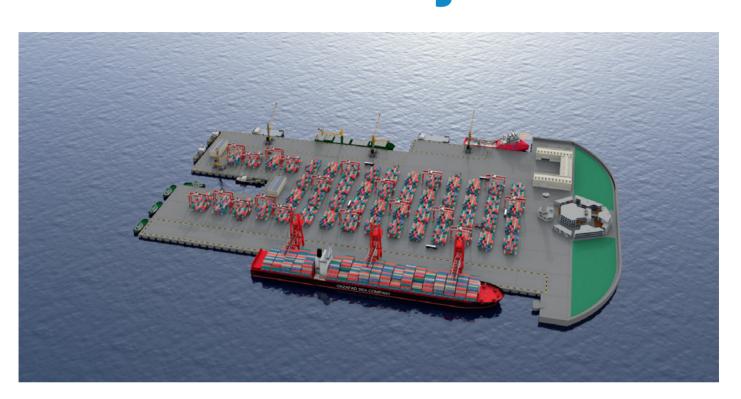
JP offers a weekly full container and less than full container service from the UK and Europe to both Kingston (13-day transit time) and Montego Bay and an only slightly less frequent service to other ports throughout the Caribbean. Said Mr Hall: "We collect from anywhere in Europe or receive it at our dedicated warehouse in London where we load the containers."

ORIGINS OF JAMAICA PRODUCERS

Jamaica Producers can trace its roots back to 1925. It became a shipping company in 1931 as the Jamaica Banana Producers Steamship Co and the owner and operator of four reefer vessels. This was Jamaica's first 100 per cent locally owned shipping line and today it has a wide and diverse shareholder register.



OFFSHORE CARGO PLATFORM IS A MEGA PROJECT



n what must be one of the most unusual and ambitious port development projects anywhere in the Caribbean, a new offshore cargo handling platform is to be built off the coast of French Guiana.

The project, which is at a very early stage, is at present known just by its acronym, MOP (multi-use offshore platform), and is essentially designed to overcome the problems of shallow water that affects all ports in the immediate region.

Grand Port Maritime de la Guyane (GPMG) has consulted experts, but has yet to agree on the type of platform and choice of location. What is certain, however, is that the platform will be located on the Guyana continental shelf in 70 meters of water.

SUPPORT

The offshore facility is expected to cost up to €1.6 billion and will be funded and operated as a public-private partnership (PPP). It will be 75 per cent public and 25 per cent private. For the time being, the project requires political and financial support from local authorities, the French government and the European Union.

Funds are also needed for future studies:

risk mitigation and technical and environmental feasibility. These are likely to cost €600,000 over the next 18 months. A similar amount has already been spent on studies since 2014.

The platform is expected to accommodate two 13,000 teu neopanamax vessels at the same time and will provide quayage for feeder vessels to shuttle to and from the mainland and elsewhere.

In addition, the facility will be an oil and gas logistics base serving two or three production rigs. The French oil giant Total is already active in the area. An aquaculture farm will

The platform is expected to accommodate two 13,000 teu neopanamax vessels at the same time and will provide quayage for feeder vessels to shuttle to and from the mainland and elsewhere



form a third element of the scheme, including offshore fish farming, seaweed harvesting and renewable energy (in order to make the platform self-sustaining).

Other investors have shown interest in setting up, for example, gasoline tanks and using the facility to accommodate large vessels. With its offshore location, it can be used for a range of activities that require space and deep water.

AQUACULTURE

Most of the cargo handled is expected to be containers. But the facility will also be used for oil and gas logistics as well as aquaculture feed and products. Studies show that, when fully operational, the platform could be handling 300,000 teu per year, of which about half would be regional transshipment traffic.

This compares with just 55,000 teu per year now being handled at the port of Dégrad des Cannes. Greatly increased container volumes would be expected to bring about a big drop in freight costs for local importers – believed to be in the region of 30 to 50 per cent.

Other benefits for the local economy would come from the aquaculture element of the scheme. Studies show that this could



generate about €30 million a year from, say, 5,000 tonnes of exports; rising to €100 million a year by 2030.

All in all, the platform is expected to create over 3,000 jobs in French Guiana and to boost the overseas department's GDP by some three per cent – or about a third of the impact that the Kourou Space Center has on the local economy.

Philippe Lemoine, director general of GPMG, summed up the project to Caribbean Maritime: "The aim is to offer the Guyana shelf a way to become properly integrated into the new maritime neopanamax shipping environment, to ease local oil and gas logistical support as production sites move south and to develop sustainable aquaculture and

bio transformation in areas where good conditions already exist."

So, this is certainly a mega-project for the future – one that is due for completion only some time between 2022 and 2026 – but it's certainly worth watching with interest.





THEY'VE GOT THE POWER...

KEY PLAYERS WHO SHAPED THE HISTORY OF OUR PORTS

Why did ports the world over develop in the way they have, with docks and warehouses all concentrated in specific areas? What key role did customs officers and shipping agents play in shaping this long history – and are there lessons to be learned by today's ship and port operators? R.G.A. Vyzelman* believes there are.

here have been three notable tipping points in the history of port development.

Two of these were related to customs law and excise taxes and they occurred many years apart, in the early 13th century and in the opening years of the 19th century. They set the pattern for modern-day seaports in terms of berths, warehouses and the separate roles of ship's crew, stevedores, shipping agents and customs authorities.

The impact of customs legislation has sometimes been arbitrary. For example, ports were obliged to expand their storage areas because of slow customs clearance procedures. This was not a positive develop-

with the smooth transit of goods to the importer.

The third tipping point came in 1991 with the eighth session of the United Nations Conference on Trade and Development (Unctad) in Colombia – resulting in the Cartagena Commitment – which had a major impact not only on port development but on liner shipping as a whole. The complete logistics shipping chain was altered forever.

CUSTOMS LAW AND EXCISE TAXES

Wharf development began in medieval times and continued in the 13th and 14th centuries. The first trade in small boats was conducted by beaching them. This prac-

'To know history is to understand the present. He who understands the present is prepared and ready for the future.'

ment, because the purpose of a port is not the storage of goods. The highest efficiency is achieved if the goods are discharged from the ship and immediately cleared into commerce. Goods do not belong in the port. They belong in households, shops and supermarkets.

Customs too often exercise their authority in an incorrect manner instead of collecting duties efficiently and consistent

tice could not continue while trade grew, because it was subject to favorable weather and tides.

The development of ports as a collection of multiple wharves in a confined area began in the early 13th century, driven mainly by trade between European ports. The principal trade route was between Continental Europe and England (wine,



By Remy G.A. Vyzelman Captain Vyzelman is president and CEO of Integra Marine and Freight Services and chairman of the Supervisory Board of Integra Port Services

spirits, clothing and agricultural products to England and wool to Europe).

EARLY DAYS: SMALL BOATS

Because of draft restrictions, cargo was transferred to shore from sailing ships at anchor by small boats that were beached; or cargo was transferred by gangway. The first trade between the Continent and England had to deal with the huge tidal range. This required solutions that would allow vessels to berth safely.

In rivers, ships lay alongside the bank to load and discharge via gangway. The semi-diurnal tides caused the ships to ground twice a day, sitting in the mud. According to Gordon Jackson, in his book 'The Rise and Fall of British Ports', the earliest use of the word 'dock' was to describe the hollow in the mud made by a ship at low tide. The next ship to dock would often try to sit in the same hollow.

River banks were protected to prevent them caving as a result of traffic – for example, embankments and piles driven into the bank to support wooden decks.

Later, wharves were built along river banks or in harbors at locations with enough depth to accommodate sailing ships. Trading companies and shipowners were the first to build wharves, with each choosing its own convenient location or wharf. Ports thus consisted of stretches of coast or river bank.

Gordon Jackson writes: "There was not much to stop the use of scattered locations, often picked to wrest the right to trade from the feudal system that controlled the economy of the Crown."

The same thing happened in Continental Europe.

In order to prevent smuggling and ensure the collection of duties, Great Britain - or 'the Crown' - was the first national authority to introduce legislation that required international cargo to be handled at a designated wharf, assigned as a port of entry. So a port was no longer a place where a ship might conveniently load or discharge its cargo, but a location where it could do so legally, under the supervision of the Collector of Royal Customs.

Smuggling continued, however, due to a lack of supervision at other locations.

After various Acts that made it a felony to trade elsewhere, the Crown in 1558 tried to end the chaos by listing all ports where legal international trade was permitted. These 'legal guays' were later referred to as king's or government wharves and, later, public wharves or general wharves.

Private wharves were forbidden to handle international trade but could deal with cabotage. The Crown would later appoint harbor masters to manage the legal quays. Other governments would adopt the same practice. In the second half of the 20th century the responsibilities would be delegated to a government entity such as a port authority. Port development really took off in the 16th and 17th centuries as a result of these changes.

Within Europe, countries sought cooperation to trade their goods and trading towns grew. Old European cities such as Amsterdam would discharge boats direct to shore or private warehouses on canals. The Hanseatic cities became major trading centers.

England led the development of Admiralty law and customs legislation. Other European countries followed in the light of the cooperation - but mainly not to lose market share of international trade.

The customs authority was set up to enforce tariffs and collect taxes. England at the beginning of the 13th century is believed to have been the first country to set up a national customs collection system created by legislation. Earlier custom taxes also applied to exports. This was later replaced by indirect taxes.

In 1207 the king levied a tax on the export of wool to Continental Europe. High sales taxes on wool had made it attractive to export to the Continent to evade the taxes. Before the early 13th century, wharves and other cargo handling locations had been scattered along coasts, river banks and beaches - ideal for smuggling.

The first customs legislation in 1207 forced all imports and exports to designated locations. The first ports as we know them today, as collections of wharves, were in the making. But an important aspect remained: ships were only allowed to berth and discharge their import cargo or load export cargoes, after the import or export duties respectively were paid.

If only for part of the import cargo the import duty was paid, the vessel was allowed to only discharge that part onto the cart of the merchant importer, under close custom supervision. Thereafter the vessel immediately had to shift back to a designated anchorage (harbor roads) until the next batch of cargo was bought and duties were paid. In other words, the ships also acted as "floating warehouses".

WATERFRONT WAREHOUSES

In the second half of the 18th century production of commodities such as sugar, cotton and coffee in the colonies increased almost sevenfold. Meanwhile, the growing population in the colonies led to a huge increase in demand for goods imported

> from Europe. There simply was not enough ship tonnage to meet this demand. while over 70 per cent of tonnage was at anchor in ports.

Construction of more sailing ships was hampered by a shortage of oak trees (about 3.000

oak trees were needed to build one ship). The British government realized that the collection of customs duties had become a bottleneck for the growth of commerce and trade.

Therefore in 1803 Britain introduced the Warehouse Act (with other countries following suit). This law introduced the ship's agent, who was legally required to take over responsibility for the goods in the warehouse. The ship's master transferred the cargo into the temporary custody of this agent. While the cargo was in the warehouse, the ship could discharge all its cargo and sail.

This accelerated trading and dockside business. It opened the way for agents to own or lease the warehouses. The ship's crew was still responsible for discharging and loading the cargo, but was often supplemented – or later replaced – by a labor force supplied by the agent. By the time sailing ships had been replaced by steamships and motor vessels, the agent had become the sole entity to handle the cargo.

Stevedoring companies were born, but as an informal entity. The agent remained the formal entity responsible for temporary storage in dockside warehouses. Over time, the duties of ship's agent and stevedore have been separated, but there are still territories where these duties are performed by one entity.

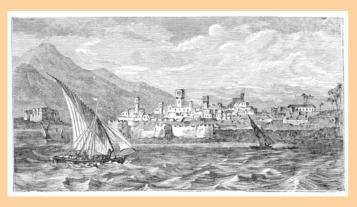
The introduction of steamships, with much smaller crews, also contributed to the use of shore labor for loading and discharging.

Not too long ago in Europe, legislation was changed to allow terminal operators to take over responsibility for the cargo in temporary storage directly from the captain of the ship; but only on behalf of the agent, who remains ultimately responsible for the cargo.

AFTER 1860

Open storage was allowed if the cargo was too large or dangerous or otherwise unsuitable for warehouse storage. Fencing became imperative. So Customs taxes and custom law actually started the real development of ports by directing all wharves to a confined area.

*R.G.A. Vyzelman has described three historical tipping points in a presentation entitled 'Port development in a historic perspective'. The third and most recent tipping point - the eighth session of Unctad in Colombia in 1991 - was covered in the last issue of Caribbean Maritime.





COLOMBIA

CARTAGENA GETS NEW OPERATING SOFTWARE

The two largest port companies in Cartagena will be upgrading their terminal operating systems to Navis N4 after using SPARCS for many years. Sociedad Portuaria Regional de Cartagena (SPRC) and Terminal de Contenedores de Cartagena (Contecar) have operated SPARCS since 1995 and 2006 respectively and have come to be widely recognized as among the most efficient ports in the Caribbean. In order to modernize their systems and remain competitive, both ports decided to upgrade their TOS sysafter a long-standing and successful relationship with Navis.

Navis currently provides TOS services at over 60 ports and terminals in Latin America.

BELIZE

CRUISE PIER OPENS AT HARVEST CAYE

A long-awaited cruise pier, located three miles off Placencia in southern Belize, was finally opened in November 2016 after originally being due to open in October 2015. Harvest Caye was built by Norwegian Cruise Line Holdings and according to the company this is the only port in Belize with a cruise ship pier. The port offers resort-style amenities including a sprawling pool and private luxury beach villas, a range of eco-activities and a zip line across the island. Excursions are also available to the mainland.

The port took four years to develop from start to opening and is predicted to generate some 500 direct jobs and over 1,500 indirect jobs by 2020.

JAMAICA SUPER CRANE DELIVERED TO KWL

Kingston Wharves Limited (KWL) has taken delivery of what is claimed to be the largest mobile harbor crane in the Caribbean.

The Liebherr LHM 600 is equipped with a 12 meter tower extension that is designed to enhance safety because of the higher position of the tower cabin. KWL previously ordered its first Liebherr crane, a type LHM 550, in November 2015.

The new crane, which entered service in November 2016, will assist KWL's handling of containerships up to super post panamax size. It has a maximum reach of 58 meters, a twin lift capability and a lifting capacity of 104 tonnes. It can work vessels up to 19 container rows wide and nine containers high. KWL has made this investment in response to the new generation of vessels being brought to the region by the Panama Canal expansion.



USA

NEW RECORD FOR PORT CANAVERAL

Port Canaveral announced a recordbreaking 35 cruise ship turnarounds between 1 and 13 November 2016. These included the maiden vovages of two of the world's largest cruise ships, the 4,100-passenger 'Norwegian Epic' and Royal Caribbean Cruises' 7,144-passenger 'Oasis of the Seas'.

PUERTO RICO

A RECORD-BREAKING CRUISE SEASON

Puerto Rico expects to break last year's record of 1.5 million passengers again in the 2017-18 season with 1.6 million visitors expected. The port of San Juan is welcoming increased calls from Oasis-class cruise ships of the Royal Caribbean fleet as well as the new MSC Cruises vessel 'MSC Seaside'. The cruise industry in Puerto Rico has posted a 22 per cent growth over the past four years. The expansion of Pier 3 in Old San Juan is viewed as a key factor in attracting the largest cruise ships to Puerto Rico. The number of home-porting passengers is also expected to grow next season with the return of Norwegian Cruise line.

PANAMA

CANAL AUTHORITY SIGNS MOU WITH LIVERPOOL

The Panama Canal Authority (ACP) has signed a Memorandum of Understanding (MoU) with Peel Ports, a major UK ports operator. Peel Ports operates the Port of Liverpool, which opened the £400 million Liverpool2 container terminal in November 2016. The purpose of the MoU is to create a strategic alliance to assist the growth of international trade between Liverpool and the west coast of South America via the Panama Canal and to exploit new markets following the opening of the expanded canal.

JAMAICA

MONTEGO BAY LNG TERMINAL OPENS

A US\$ 175 million liquefied natural gas (LNG) terminal was finally opened in Montego Bay late in 2016 after investment by US-based New Fortress Energy LLC. The LNG is pumped by pipeline to the Jamaica Public Service Company's 120 megawatt Boque power plant, which had previously run on diesel oil. The government now hopes to build an even bigger plant in Old Harbour Bay, St Catherine, with tentative plans to transform Jamaica into an LNG hub for the wider region.





- Sir Richard Branson's newest venture, Virgin Voyages, will initiate the construction of the first of three new vessels in 2017. The ship, with a capacity of over 2,700 passengers and 1,150 crew, is due for delivery to PortMiami in 2020. All three ships, with at least one home-ported in PortMiami, are expected by 2022. The new ships will be fitted with Climeon Ocean, an energy system that transforms low-grade energy into clean electricity in what is seen as a cruise industry first. The clean energy system is predicted to reduce carbon dioxide emissions by 5,400 tons per vessel per year.
- US-based Viking Ocean Cruises has launched its firstever Caribbean itinerary with an 11-day West Indies Explorer cruise package out of its winter port, San Juan. Its vessels will call at ports in the British Virgin Islands, Antigua, St Lucia, Barbados, Guadeloupe, St Kitts, Sint Martin and the US Virgin Islands. Viking Ocean Cruises began in 2015 with its first ship, 'Viking Star', with a capacity of 930 passengers. It was joined by 'Viking Sea' in 2016 with 'Viking Sky', 'Viking Sun' and 'Viking Spirit' to follow through 2017 and 2018.
- Carnival Cruise lines will increase its capacity in Florida from January 2018 by adding the 2,124-passenger 'Carnival Miracle' to join the 2,052-passenger 'Carnival Paradise'. Both will operate year-round Caribbean cruises from Tampa. 'Carnival Miracle' will operate a seven-day Caribbean cruise out of Tampa. Before beginning the new service, Carnival Miracle will offer Panama Canal cruises.
- Royal Caribbean Cruises has placed orders for two 200,000 gt ships from Finnish shipbuilder Meyer Turku. These vessels, due to be delivered in 2022 and 2024, will be the first of a new generation of LNG-powered cruise ships under the name of Icon. The new ships are expected to accommodate some 5,000 passengers.

1

INCENTIVES FOR GREENER VESSELS USING PANAMA CANAL

The original Panama Canal was built to save both time and fuel compared with going the long way round; and while the expanded canal will further lessen carbon dioxide emissions from transiting ships, a new initiative by the Panama Canal Authority (ACP) called the Environmental Premium Ranking will reward vessels that are more energy-efficient and reduce their carbon dioxide emissions.

Software has been developed to calculate a vessel's carbon dioxide emissions based on ship type, cargo volume and route. Vessels will be able to improve their position by means of a Customer Ranking System, based on indicators such as the Energy Efficiency Design Index (EEDI), the Environmental Ship Index and use of LNG fuel. The best-ranked vessels will get priority booking, allowing them to effectively jump the queue for transits. The new incentive system will begin on 1 January 2017.

2

GOOD FIGURES FOR PANAMA CANAL

The first figures from the expanded Panama Canal have been very good despite a global downturn in shipping. At the end of fiscal year 2016 the canal recorded its third-highest tonnage ever at 330.7 million Panama Canal tons. A total of 13,113 vessels transited the canal between 1 October 2015 and 30 September 2016. The expanded canal opened in June 2016 with 238 neopanamax (new panamax) vessels transiting in the first three months. The largest segment of the traffic – over 36 per cent – was containerships, followed by bulk carriers, tankers and vehicle carriers. The focus in 2017 will be on continuing to enhance the logistics infrastructure in Panama.

3

NEW CARIBBEAN-MEXICO LINK WITH CMA CGM

CMA CGM has added a new weekly direct service linking Mexico with Cuba, Jamaica and the Dominican Republic. The new INDIGO line is predicted to reduce transit times between Mexico and the Caribbean as well as giving access to the Cuban ports of Mariel and Santiago de Cuba. The new service will also call at Kingston, Jamaica, and Progreso, Mexico. This announcement is the latest in a series of changes and new services from the company.

THREE ROYAL **CARIBBEAN VESSELS MEET AT SEA**

For what may be the only time, the world's three largest cruise ships met at sea off Florida on 4 November 2016. The 'Oasis of the Seas'. 'Allure of the Seas' and the new 'Harmony of the Seas', all Oasisclass ships operated by Royal Caribbean, met up to mark the arrival of 'Harmony of the Seas' at its new home port of Port Everglades. It is currently the world's largest cruise ship, measuring 1,188 ft in length and able to accommodate 5,498 passengers in 2,747 cabins. 'Allure of the Seas' is also home-ported at Port Everglades, while 'Oasis of the Seas' is home-ported at Port Canaveral.





CSA DIARY

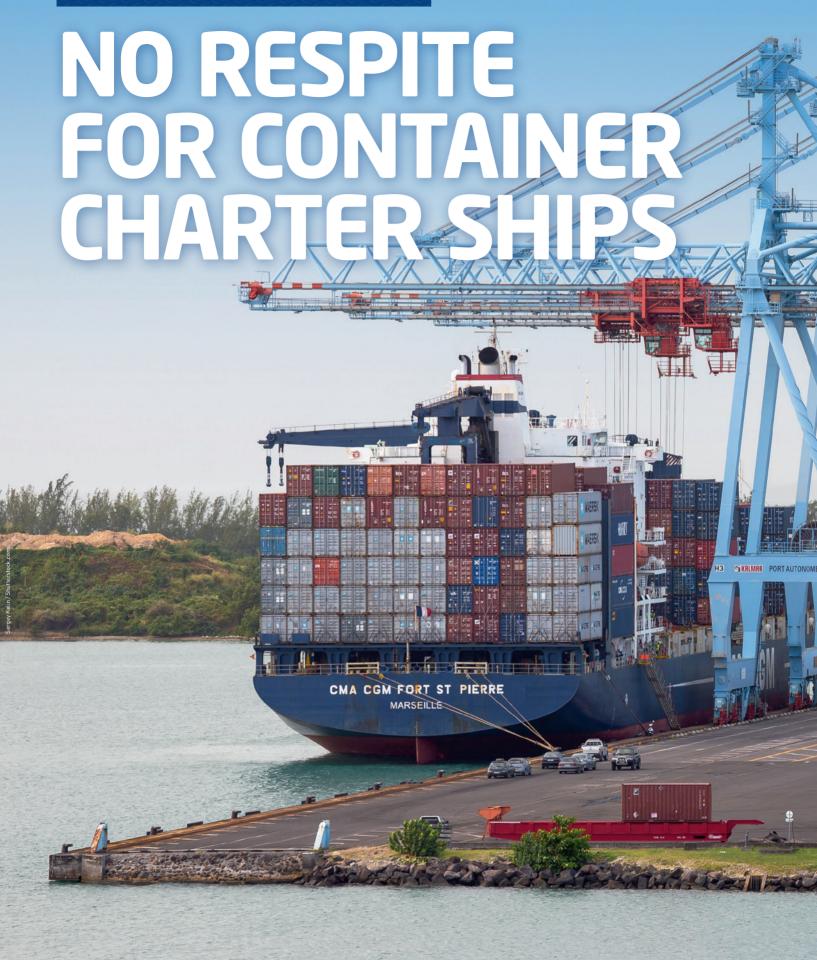








42







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RUSSBROKER CARIBBEAN MARKET REVIEW

Ships of 2,500 teu once again faced the greatest difficulties. Up to five spot vessels in the Caribbean, which made up over 15 per cent of all 2,500 teu charter tonnage involved in intra-Americas trades, forced earnings to new lows of US\$ 5,500.

The development to employ more gearless ships in the Caribbean continued as one operator positioned one 1,200 teu and one 1,700 teu vessel from the Mediterranean to be employed in services traditionally run with self-sustained tonnage.

SALE AND PURCHASE OF CONTAINER TONNAGE IN CARIBBEAN

Buying activity focused on the smaller segments as one 600 teu ship was sold at auction and a very keen Greek buyer continued to pick up tonnage in the 1,100 teu range, mainly from insolvent German owners.

MACROECONOMICS

The overall global economic outlook for 2017 predicts a slight improvement on 2016 levels. GDP growth values, however, have to be taken with caution when trying to forecast trade levels as the historic ratio of GDP to trade growth of between 2:1 and 3:1 is estimated to drop below 1:1 for 2016. The worldwide protectionist trends, the contraction of global value chains and the increasing role of the digital economy and e-commerce are some of the possible reasons for the decoupling of this traditional relationship.

Economic contraction, however, will hardly be helpful to trade interests and so Brazil's turnaround is a positive sign for the region. The Brazilian real and equity markets have appreciated over the past couple of months and rising industrial production contributed significantly to the positive expectations.

The recent big trade topic has been Donald Trump's surprise win. His generally protectionist stance and his specific aversion to Chinese and Mexican imports have the potential to negatively affect world trade. During the election he announced several times his intention to terminate the North American Free Trade Agreement, which embraces Canada

SELECTED CONTAINER FIXTURES							
	SUB 1,00	00 TEU – GEARED, CELLED					
	Sep 16	Stoer Trader 660 teu / 390@14 / 17on26 / 75rp	5-7 months	US\$	7150.	p/d	
	Oct 16	Vega Scorpio 966 teu / 604@14 / 17on44 / 252rp	15-45 days	US\$	6950.	p/d	
	1,100 TE	U – GEARED, CELLED					
	Sep 16	Frisia Inn 1,114 teu / 700@14 / 19on45 / 220rp	4-8 months	US\$	7100.	p/d	
	Oct 16	Caribbean Voyager 1,118 teu / 700@14 / 19on42 / 220rp	3-6 months	US\$	6950.	p/d	
	1,300 TE	U – GEARED, CELLED					
	Sep 16	Max Wonder 1,341 teu / 925@14 / 20on52 / 449rp	3-6 months	US\$	7900.	p/d	
	Oct 16	Bomar Regent 1,338 teu / 925@14 / 20on46 / 449rp	4-8 months	US\$	8000.	p/d	
	Nov 16	Stadt Gotha 1,296 teu / 957@14 / 20on47 / 390rp	1-7 months	US\$	7500.	p/d	
	1,700 TE	U – GEARED, CELLED					
	Sep 16	Gluecksburg 1,688 teu / 1287@14 / 21on60 / 345rp	5-7 months	US\$	7000.	p/d	
	Oct 16	Maersk Willemstadt 1,700 teu / 1186@14 / 20on60 / 192rp	6-19 months	US\$	6525.	p/d	
	2,500 TE	UGEARED, CELLED					
	Sep 16	Kiel Trader 2,524 teu / 1828@14 / 22on83 / 481rp	2-12 months	US\$	5500.	p/d	
	Oct 16	Pandora 2,690 teu / 2100@14 / 22on88 / 500rp	4-8 months	US\$	6000.	p/d	
	Nov 16	Antwerp Trader 2,490 teu / 1868@14 / 19on74 / 566rp	2-12 months	US\$	5500.	p/d	

and Mexico. At first glance, a weakening Mexican economy appears to be a strong blow to the Caribbean and Central American region; however, Mexico's share of exports to Central and South America amounts to only 1.8 per cent and five per cent respectively. Mexico's shares of total imports from Central and South America are 2.3 per cent and 1.3 per cent.



CONTEX									
	CONTEX	12 MONTHS, 1100	12 MONTHS, 1700	24 MONTHS, 2500					
Sep 16	314.88	6,775	6,848	7,013					
Oct 16	308.50	6,541	6,732	6,885					
Nov 16	300.70	6,294	6,620	6,688					
Dec 16	296.00	6,138	6,472	6,611					





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WHATEVER YOUR PLATFORM

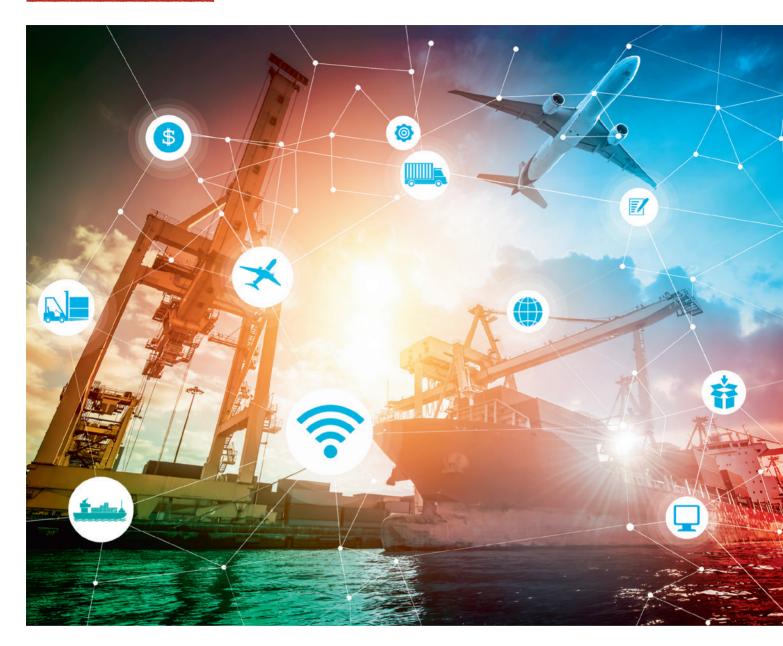
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You can never get too smart - or can you?

What happens when you take a component item from the world of shipping - such as a container or a truck or a warehouse - and fit it with smart technology? It then becomes part of the Internet of Things. This next level in the internet evolution will bring new advantages but also new dangers.

he internet has undoubtedly revolutionized the way we work, play, communicate and do business. So seamlessly has it been integrated into our lives that we often take for granted the significant portion of even the most routine activities like watching TV, talking with our loved ones or printing a document that is internet-based.

Consider now the Internet of Things (IoT) - the next level in internet evolution. IoT will ultimately turn anything into an intelligent or smart thing - ships, containers, trucks, warehouses, everything.

How? Firstly, by outfitting any 'thing' with technology that allows it to connect to an internet network. So, what are these things? In the context of IoT, a 'thing' should have the following:

- Communication the ability to send and receive information over a network
- Identity the ability to be uniquely identifiable
- Sensor should be able to sense things about its state and/or its environment
- Controllable devices should be capable of being controlled remotely (think the robot apocalypse).

Nearly anything can be made into a 'thing' on the internet. A container could be made into a thing by installing the appropriate sensor. Port workers can be things on the internet with wearable devices. Now you can imagine that your team member's device could tell you where he (or she) is, what team members are with him and if he is in distress? It could alert the paramedic if there are any abnormalities in the vital signs while at the same time making suggestions on his smart phone of procedures or medications to take based on medication available in a smart medicine kit until the paramedics arrive. This isn't science fiction - these devices actually exist.

The sky's the limit with making things 'smart' and interconnecting them through the internet. We are familiar with smart cars, smart gardens, smart buildings, waste management tools – even land and sea are not excluded. For example, it's quite easy to imagine how placing sensors in the harbor can be useful to environmentalists as they can monitor erosion trends, water levels, toxicity of the water (ships might be leaking oil and waste into the harbor). This seems far-fetched, even strange and unnecessary, but this could become the norm in the future. IoT is here and we need to position ourselves to capitalize on it.

HOW?

Smart devices provide a way for businesses to collect more and more data about how products and services are used which open the way to better business decisions and,

eventually, better products and services. IoT is still in its infancy; however, big companies like Amazon, Samsung and Google are making huge investments in IoT devices. In 2014 Google acquired Nest for US\$ 3.4 billion. Nest specializes in home automation smart devices such as thermostats, smoke detectors and surveillance cameras. Since its acquisition, it has become one of the leading providers of smarter home devices. This could easily transfer to offices, warehouses and manufacturing plants.

Businesses also stand to gain tremendously from IoT in areas of security, shipping, location tracking and inventory control and in managing energy usage. An IoT device could monitor your equipment to determine its usage pattern and indicate signs of possible failure and schedule maintenance well in advance before it breaks down.

SECURITY AND PRIVACY

Notwithstanding the numerous benefits of IoT, ethics, security and privacy are obvious concerns. As we become more interconnected, these devices increase our exposure to hackers and cyber criminals. In December 2015 the power grid of Ukraine was hacked. It was reported that workers watched helplessly as the computer system was remotely controlled to navigate to circuit breakers, open the breaker box and take the system offline.

Researchers at the University of South Alabama demonstrated how a pacemaker could be hacked to cause death (thankfully, this experiment was done on a mannequin). Then there is this matter of privacy. Who is collecting the data? What are they collecting? Who are they sharing it with?

And is it secured at the data centers?

In trying to address these issues there needs to be a strategic approach to the information value loop. The solution must start with IoT devices. By default, these devices should have security built in. Additionally, companies

should carry out privacy and security risk assessment. Companies should also try to minimize the type and amount of data collected and retained. It is going to be critical for companies to be able to demonstrate these precautionary measures to inspire consumer confidence in IoT products.

THE FUTURE

The true value of the Internet of Things comes from the data that these devices collect, how we harness that data and use it to improve our services and operations. The proliferation of smart devices provides a way for us to better understand our operating environment, our clients and our industries. This wealth of data will inspire a massive leap in 'big data'. There will be so much we can learn.

We can understand the relationships in the data to retrieve information and understand the patterns in the information to gain knowledge and finally understanding the principles of the knowledge to gain wisdom. Hence a wiser, safer, more productive and efficient shipping industry. We look forward to a future where smart offices, smart vehicles and even smart ports will be commonplace.

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