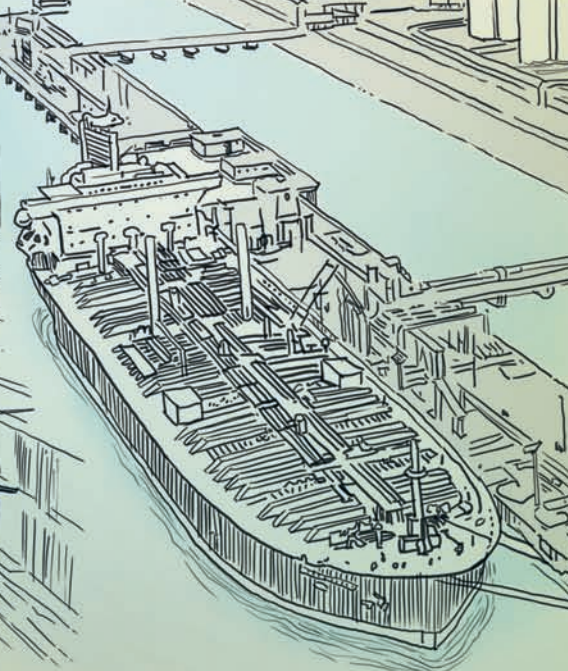
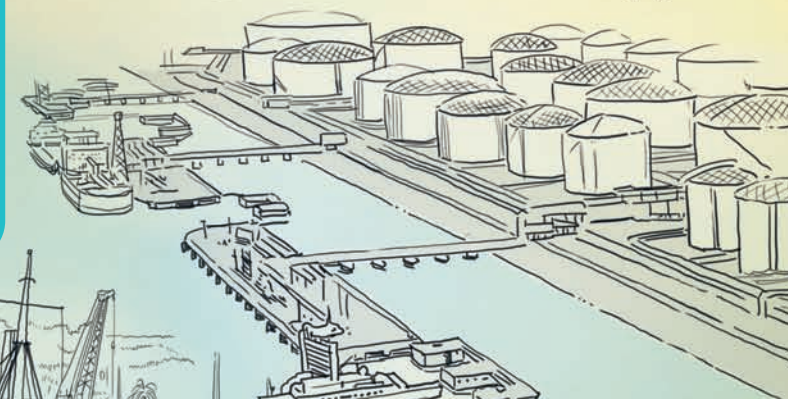
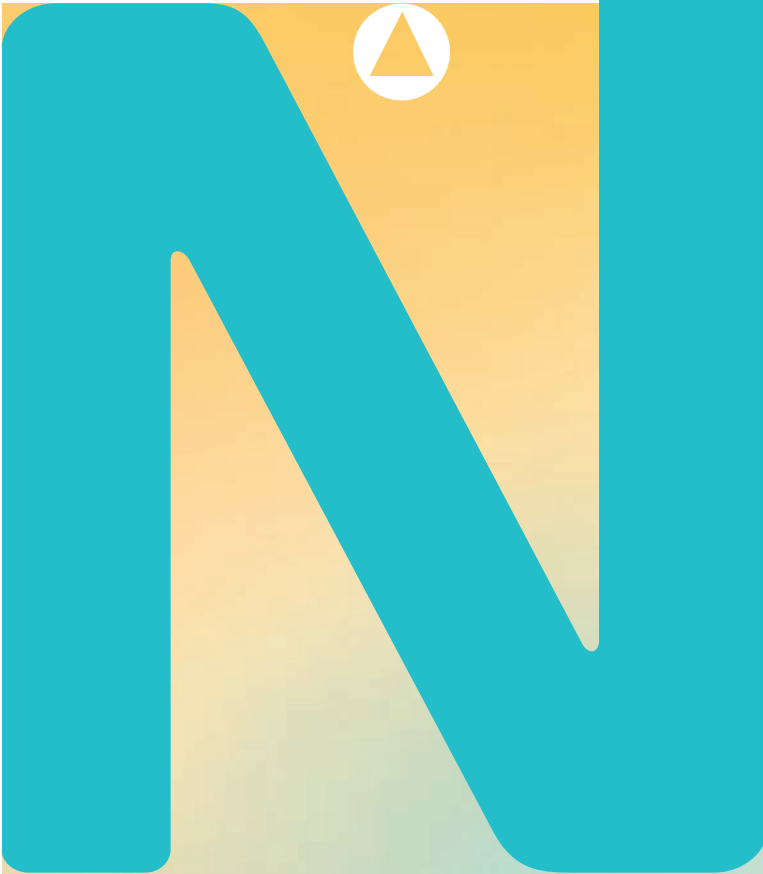


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2012



► superyacht boom ► arbitrating  
stormy waters ► Singapore's rich  
maritime legacy

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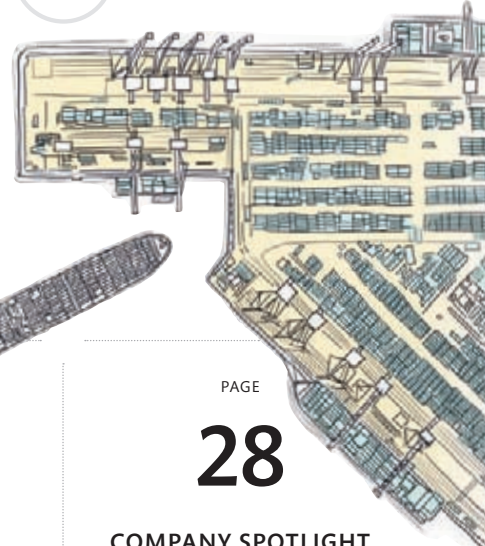
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# Maritime Heritage

Many might be more familiar with Singapore's beginnings as a tiny fishing village, but less with how we've grown from that to become a diverse and vibrant maritime hub today. In this issue, *Singapore Nautilus* takes a look at the country's maritime story, highlighting some of our early beginnings in the 1840s, all the way to developments during Singapore's independence and today. To summarise so much over so few pages does not do our rich heritage much justice, but we hope to give you a sense of how Maritime Singapore has grown through the years.

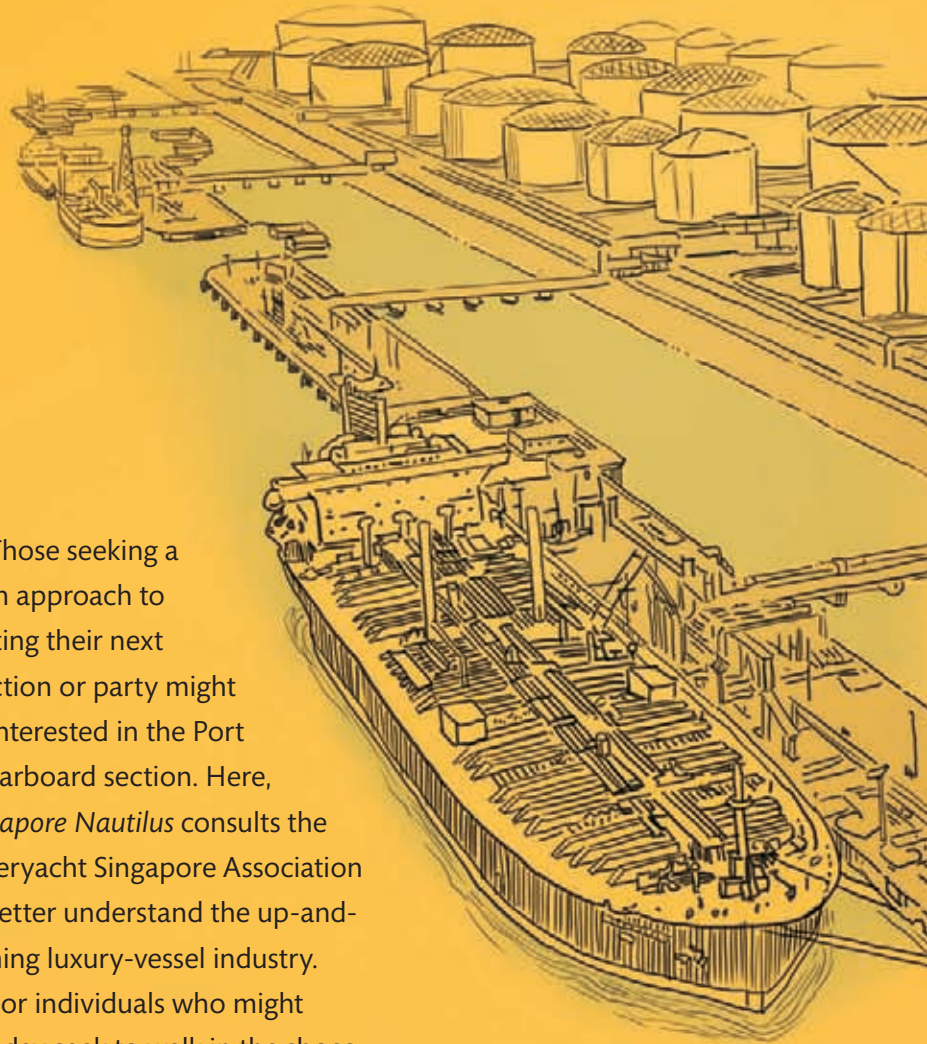
We also speak with PSA, which is celebrating 15 years of corporatisation this year, to find out its most memorable moments so far.

Those seeking a fresh approach to hosting their next function or party might be interested in the Port & Starboard section. Here, *Singapore Nautilus* consults the Superyacht Singapore Association to better understand the up-and-coming luxury-vessel industry.

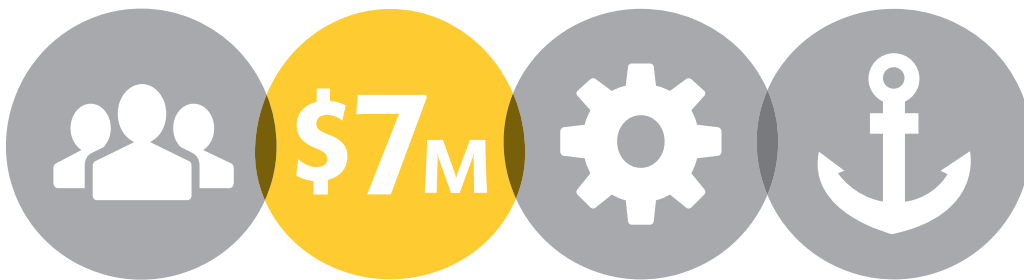
For individuals who might one day seek to walk in the shoes of a maritime arbitrator – whose main job is to resolve maritime-related disputes – turn to our Maritime Careers section. There, Captain Lee Fook Choon tells us what exactly his job entails and elaborates on his career path.

*wee shann*

executive editor



## MPA, WDA and e2i commit more than \$7 million to train locals for harbour craft sector



► To attract Singaporeans to the harbour craft sector, the Maritime and Port Authority of Singapore (MPA), Singapore Workforce Development Agency (WDA) and Employment and Employability Institute (e2i) will invest more than \$7 million over two years in two new initiatives.

The first is a new traineeship programme to train locals to work as marine engineer officers on board ships that ply within Special Limits in and near Singapore. The second initiative is the topping up of training allowances of cadets in Special Limits programmes for both marine engineer officers and deck officers.

Last year, the inaugural Special Limits programme for deck officers was launched, with more than 70 cadets currently enrolled. The strong take-up rate, coupled with interest from companies for a similar course, prompted MPA, WDA, e2i and the Singapore Maritime Academy to develop

a similar programme for marine engineers.

The new traineeship programme for marine engineer officers will be added to the Certificate of Competency (CoC) (Special Limits) training framework. The first intake of the programme will commence in October this year.

To encourage participation, MPA, WDA and e2i will support 90 per cent of the course fees. In fact, MPA will allocate more than \$4 million to co-fund the course fees and increase cadets' training allowances.

With MPA's additional funding support, cadets will receive a monthly training allowance of at least \$1,200, and more as their training progresses. This is at least twice the amount of the current monthly allowance.

The top-up will be implemented from October 2012 for two years.

"The harbour craft sector

is an integral part of Maritime Singapore and it is a key priority for MPA to ensure that the sector continues to attract Singapore workers. To this end, we are pleased to collaborate with our partners – e2i and WDA – through these new initiatives to attract more Singaporeans to join the harbour craft sector," said Mr Lam Yi Young, Chief Executive of MPA.

Mr Gilbert Tan, Acting CEO of e2i, said: "The CoC Deck Officer (Special Limits) programme has successful

take-up rates, and e2i is pleased to continue our collaboration with MPA on the marine engineer programme."

Mr Wong Hong Kuan, Chief Executive of WDA, added: "WDA has been working with MPA and e2i since 2009 to develop a series of manpower development initiatives to build a core pool of Singaporeans for the harbour craft sector. The industry offers viable career opportunities with good pay and job advancement prospects."

## Singapore Nautilus clinches gold



► *Singapore Nautilus*, a magazine published by SPH Magazines, on behalf of the Maritime and Port Authority of Singapore (MPA), snagged two gold awards at the recent 2012 Tabbie Awards. A leading international competition for trade, association and business publications, the Tabbie

## Upgrading works for POCC-Vista completed

► Upgrading works for the Port Operations Control Centre at PSA Vista (POCC-Vista) were carried out as part of the Maritime and Port Authority of Singapore's (MPA) continuous efforts to enhance safety of navigation and protection of the marine environment in Singapore's port waters and the Singapore Straits.

Mr Lucien Wong, Chairman of MPA, recently officiated the

recommissioning ceremony to mark the completion on Sept 5, 2012.

Started in August 2011, the \$10 million upgrading project has given the refurbished centre a fresh new look and equipped it with the next-generation Vessel Traffic Information System (VTIS).

The state-of-the-art VTIS is able to integrate data from various sources like radars,

Automatic Identification System, Harbour Craft Transponder System, Closed Circuit Television System and ship databases that will allow MPA's Vessel Traffic Management (VTM) officers to manage sea traffic operations in a safer and more efficient manner.

The upgraded VTIS has the ability to handle up to 10,000 vessel tracks at any one time, twice the capacity of the VTIS before upgrading works.

POCC-Vista now has 18 work stations comprising 30- or 56-inch screens with high-resolution displays and enhanced monitoring functions, which can assist VTM officers in detecting potential collisions and grounding situations, and facilitate timely provision of information and warnings to ships.



## Singapore and Denmark sign MOU



► Singapore and Denmark signed a Memorandum of Understanding (MOU) on maritime cooperation.

Mr Lui Tuck Yew, Minister for Transport, Singapore, and Mr Ole Sohn, Minister of Business and Growth, Denmark, signed the MOU in August.

Mr Lui said: "I am delighted that Singapore and Denmark have taken proactive steps to enhance bilateral cooperation in the maritime sector. This MOU will enable our two countries to build on our common maritime interests and address the challenges ahead."

"Singapore and Denmark are both leading maritime countries with strategic interests in high-quality maritime services. The MOU provides a solid foundation for engagement in a range of maritime activities for the benefit of both Singapore and Denmark," said Mr Sohn.

Under the MOU, Singapore and Denmark will explore opportunities for collaboration in the areas of quality shipping, green shipping as well as maritime research and development, education and training.

Awards received nearly 500 entries this year.

*Singapore Nautilus* (Issue 17) bagged a Gold Award in the Best Single Issue category. Judges praised the magazine for its "use of a single graphic concept to convey a heavy subject matter in a very readable, interesting way". They also commented: "*Singapore*

*Nautilus* is not what you'd expect from a maritime magazine. Its look is crisp, fresh and engaging to the reader. Its articles are deep and thought-provoking, and are highly useful and targeted to its audience. From cover to cover, *Singapore Nautilus* is a treasure to read and look at."

The magazine also received

a Gold Award for Feature Design, winning praise for its "variety of elements, colour and font choices", as well as a "well-designed layout".

This is the second time *Singapore Nautilus* has been honoured at the *Tabbie Awards*. Last year, it clinched a Gold and two Honourable Mentions.

## Official Launch of Singapore Maritime Gallery



Mr Lui Tuck Yew (above right), Minister for Transport, was the guest of honour at the official opening of the Singapore Maritime Gallery. The gallery was developed by MPA at a cost of \$5 million.

## MOT Family National Day Observance Ceremony



Mr Lui Tuck Yew (far left), Minister for Transport, was the guest of honour at the MOT Family National Day Observance Ceremony.

## Official opening of Marina South Wharves



Mr Pang Kin Keong (middle), Permanent Secretary of the Ministry of Transport, officiated the opening of Marina South Wharves, Singapore's new lighter terminal.

## Visit by Pacific Islands Forum



MPA hosted a visit for the Pacific Islands Forum delegates at the Port Operations Control Centre in Changi.

## Visit by *Kojima*



Captain Yasushi Fujii, Commanding Officer of Japan Coast Guard's training vessel *Kojima*, led the vessel's cadets on a visit to MPA and the Integrated Simulation Centre at Singapore Polytechnic.

## Visit by Thailand Civil Service Commission



The Office of the Civil Service Commission (Thailand), led by Dr Surapit Promsit (top, far right), paid a visit to MPA.



# CRUISE CO



# CONTROL

THAVA RANI FINDS OUT FROM THE SUPERYACHT SINGAPORE ASSOCIATION ABOUT THE RISE OF THE MULTIMILLION-DOLLAR YACHTING INDUSTRY HERE.

Over the years, as the well-heeled took to the boating lifestyle in a big way, their pleasure craft of choice – the yacht – has also become bigger, better equipped and more stylish. In fact, some owners are in possession of what is known as a superyacht, defined as a professionally crewed vessel measuring more than 24m in length.

Indeed, the Singapore yachting industry, too, has come a long way. According to a report by *The Business Times* earlier this year, it currently commands a cool US\$45 million (\$S58 million) of the Asian market, which is estimated to be worth US\$345 million a year and looks set to position itself as a regional hub in the near future.



ONE°15 Marina Club is nestled within the exclusive Sentosa Cove enclave.

### Welcoming visitors

In light of the growing popularity of such luxury craft, the Superyacht Singapore Association was formed in 2007 with the primary objective of promoting Singapore as a prime superyacht destination.

“Traditionally, yachting has been very associated with the West,” says YP Loke, Vice-Chairman of the Superyacht Singapore Association.

“Over the years, more and more Asians are starting to invest in superyachts, basing these vessels in Singapore and Asia. The surge in the presence of such yachts here can be attributed to Singapore’s investment in developing quality marinas for them to visit.”

There are four marinas in Singapore that can accommodate at least 30 superyachts at any given time: Raffles Marina Club, ONE°15 Marina Club, the Republic of Singapore Yacht Club

**“The surge in the presence of superyachts here can be attributed to Singapore’s investment in **developing quality marinas** for them to visit.”**

YP Loke, Vice-Chairman, Superyacht Singapore Association

and Marina at Keppel Bay. Refuelling, freshwater points and 24-hour security are just some of the services provided at these marinas. Two of them have even been conferred the highest rating of five Gold Anchors by the British Yacht Harbour Association, which helps boat users find the best-quality marinas worldwide.

It is no surprise then that the number of superyachts visiting Singapore over the last few years, whether berthed for an extended period of time or docked for a quick stopover, has increased.

“Since the association’s inception, there has been a five-fold increase in superyacht visits. In fact, in 2010, we recorded 81 visits, which is a critical milestone for the association as well as the industry,” shares Sandy Lee, Manager at the Superyacht Singapore Association.

The yachts are also getting bigger. Lee adds: “The average size of superyachts visiting Singapore has been increasing. Our superyacht vocabulary has now been extended to include megayacht and even gigayacht.” (Typically, the terms



superyacht and megayacht are used interchangeably, while a gigayacht refers to a vessel that is 67m or longer.)

Luxury yachts and superyachts, previously only associated with the affluent, also seem to be getting more accessible to the masses. Aside from the growing number of local superyacht owners, more people are expressing interest in chartering superyachts, be it for business meetings, wedding receptions, birthday celebrations or team-building initiatives. At last count, an average of 40 charters per month has been transacted at Marina at Keppel Bay this year, twice the figures from last year.

Says Lee: "In 2010, the association saw the concerted efforts of marina members in upgrading their berthing and dry-stack capabilities to cater to a burgeoning market in this nascent industry."

### East meets West

Continuing its work on various fronts to boost Singapore's reputation as a yachting hub, the Superyacht Singapore Association supports the hosting of annual trade events such as the Asia Pacific Superyacht Conference and the Singapore Yacht Show, which bring together some of Asia's wealthiest entrepreneurs, superyacht builders, brokers and charter companies. The association is also in discussion with authorities in neighbouring countries to ensure ease of passage for Singapore-based yachts.

Attended by yachting professionals from all over the world, these events are also an effective networking platform to raise global awareness of Singapore's ideal geographical position, making our nation state a good "country partner" for international business transactions.

According to Lee, looking to help industry players here venture into the lucrative superyacht refit-and-repair market is also on the association's agenda.

Indeed, it is now the time to ride the wave.

FACING PAGE: Refuelling, freshwater points and 24-hour security are some of the services provided at marinas here.

## SPOTTED ON SINGAPORE'S SHORES



### ECO-FRIENDLY SUPERYACHT SILVER ZWEI

It has been hailed as one of the greenest superyachts ever built and is the world's fastest conventionally powered motor yacht. Measuring 73m, it is also the longest yacht made entirely from aluminum. Fast but with low fuel consumption, *Silver Zwei* is the future of sailing with its eco-friendly hull and a helipad on its foredeck.

#### SILVER ZWEI IN NUMBERS

##### Overview

Type: Motor yacht

##### Dimensions

Length overall: 73.3m

Beam: 10m

Draft (minimum): 2.4m

##### Engines

Type: Twin MTU diesels

Total power: 2 x 2,465kW at 2,000rpm

##### Performance & capabilities

Maximum speed: 27 knots

Range: 4,500 nautical miles

##### Accommodation

Guests: 18

Crew: 16



### HOME-GROWN SUPERYACHT MEGAWAY 128

It may not have been the biggest around, but it caught the eyes of more than a few guests at the annual Singapore Yacht Show in April this year. With its sleek clean lines, *Megaway 128*, one of the newest luxury motor yachts on the market, is the first yacht to be built from concept to completion by a Singapore yard.

#### MEGAWAY 128 IN NUMBERS

##### Overview

Type: Motor yacht

##### Dimensions

Length overall: 39.01m

Beam: 8.5m

Draft (minimum): 1.7m

##### Engines

Type: Twin MTU diesels

Total power: 2 x 1,500hp

##### Performance & capabilities

Maximum speed: 18 knots

Cruising speed: 15 knots

Range: 5,000 nautical miles

##### Accommodation

Guests: 12

Crew: 8

Cabins (guests): 6

Cabins (crew): 4

# FROM STREN TO STRE



# GTH NGTH

► FROM ITS HUMBLE BEGINNINGS AS A FISHING VILLAGE, SINGAPORE HAS MADE ITS WAY TO BECOME A RISING PORT OF CALL FOR SHIPS IN THE FAR EAST-EUROPE TRADE.

Today, Singapore hosts a vibrant and diverse maritime landscape employing over 170,000 people of different nationalities. *Singapore Nautilus* delves into its rich maritime legacy for a look at how Maritime Singapore has grown over the years.



ABOVE: The *Illustrated London News* reporting the opening of a new dock in Singapore.



1840s-1940s

# SHIPPING AND PORT DEVELOPMENT

► The Singapore River and the Waterfront were a veritable picture of congestion by the 1840s. The arrival in 1845 of the first Peninsular and Oriental Steam Navigation Company (P & O) steamship service simply worsened maritime traffic conditions.

## A coal depot

With the advent of steamships, coal had to be stored on shore for refuelling, thus putting further pressure on the Singapore River and its fast-growing adjacent commercial areas. Singapore's excellent location and a ready-made harbour facilitated an ideal coal bunker depot, as envisioned by Sir Henry Keppel, Admiral of the fleet in Singapore, but the need for new wharves and a harbour suitable for ocean-going ships became pressing.

From Keppel's 1848 survey, New Harbour (later known as Keppel Harbour) became an obvious location. It was deep and its waters were protected by offshore islands Pulau Blakang Mati and Pulau Brani, and tiny islets around them.

## The cargoes

Despite the great congestion at the port during the turn of the century, trade and business flourished. Singapore had become a Crown colony, with free port status, thus attracting more shippers and trading companies to its advantageous geographical position. Western vessels calling at Singapore also increased.

Indian opium was an important cargo at the time; half of imported opium to Singapore being re-exported to China and the balance absorbed locally and by the region. Tea, tobacco, spices, pepper and dyes were among commodities traded in Singapore, as well as textiles from Asia and the West.

## Steamships, new wharves and docks

In 1852, P & O set up their coal depot at Tebing Tinggi, an outcrop of land that eventually developed into Keppel Harbour. By 1886, P & O had a full-fledged wharf. Other British and European companies followed from the 1850s, with private

docks, wharves and godowns.

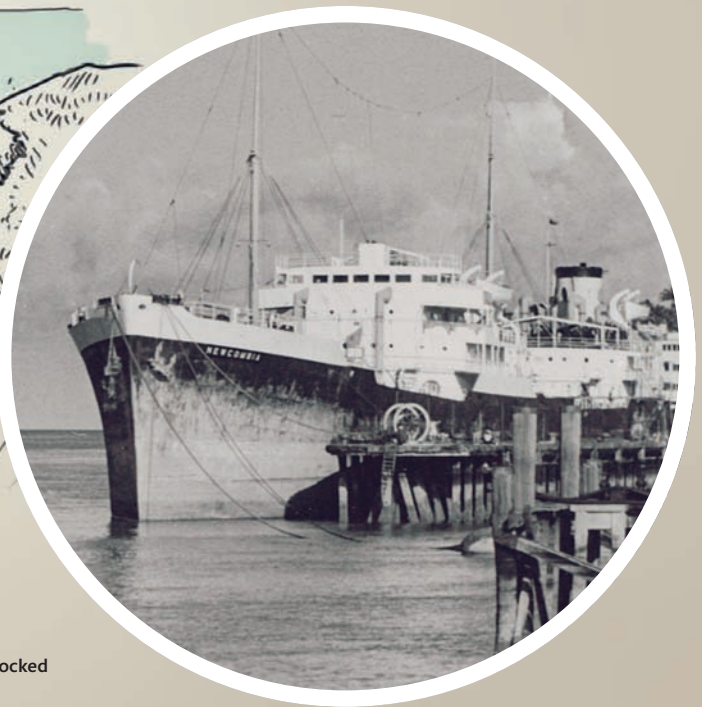
Steam technology contributed a landmark event to Singapore's transition in shipping – there was more speed and efficiency in faster turnaround and profits. In fact, steam technology dealt a fatal blow to sail shipping. As a result, the Far East trade, with Singapore in its midst, became highly attractive.

Keppel Harbour developed rapidly and in 1853, the Patent Slip and Dock Company opened the first dry dock in Singapore at Pantai Chermin. Soon, Tanjong Pagar Dock Company opened its first dry dock, Victoria Dock in 1868. Capacity and services improved vastly.

More shipping lines acquired steamers that had stopped at Singapore to refuel, repair, discharge and also take on cargoes. Singapore became a trans-shipment hub.

## Development of port facilities

Tonnage shot up even more steeply after 1869 when the Suez Canal opened and reached 1.5 million net registered tonnage



RIGHT: Steamer docked at New Harbour.

# VELOPMENTS

(NRT) by 1880. Steamers accounted for 1.2 million NRT.

By 1900, tonnage was 5.7 million NRT, mostly handled by the Tanjong Pagar Dock Company, as a result of wharf extension, leading to a monopoly of port facilities by a private company.

However, Keppel Harbour facilities and services could not meet with the growth in numbers of vessels calling at Singapore. There was tremendous pressure despite the then modernising facilities of steam winches and cranes being installed in 1874. Volumes moved up from 200 to 300 tonnes a day (under manual loading) to 500 to 800 tonnes per day.

Electricity was installed in 1897 for the wharfs and docks, thus working hours doubled by night, yet ship turnaround still lagged after 1898. There was a shortage of warehouse and berthing spaces.

**Tanjong Pagar Dock Board and the Singapore Harbour Board**  
The Tanjong Pagar Dock Company

was controlled by a group of powerful shareholders in London, who were at the time indecisive over any costly expansion and improvements strongly recommended by the Singapore directors.

Thus the British government in 1904 took the step of expropriating control of the port from them when it was clear that the health of the entire operations of the port was closely linked to the livelihood and lives of the local population and economy of Singapore.

As a result, the Tanjong Pagar Dock Company became the Tanjong Pagar Dock Board in 1905, under Crown rule.

Seven years later in 1912, the Tanjong Pagar Dock Board in turn passed control over these facilities to the newly formed Singapore Harbour Board.

**Expanded range of commodities**  
Singapore's economy benefited greatly from the impact of the opening of the Suez Canal in 1869. Faster shipping time made by steamers also accelerated the

development. Business opportunities enjoyed critical advancement in Singapore. Yet another major technological advancement – the telegraph – boosted global communications and business.

The revolutionary breakthrough came on Dec 31, 1870 when new telegraphic service to India, Europe and America was operative. Goods were transacted in transit across continents; orders and information were transmitted swiftly. Trade volumes increased exponentially – eight times between 1873 and 1913.

Responding to global demands, bulk cargoes began to include rubber, tin, copra and sugar. Oil was already an important commodity for Singapore.

## The companies

European firms trading in Singapore were served by European shipping companies like P & O, Ben Line and Blue Funnel Line. Walter Mansfield founded Mansfield & Company, ship chandlers and agents for Blue Funnel Line of Liverpool.



## Singapore's free-port status contributed to the flourishing maritime trade and its place along international maritime routes.



Mansfield directors teamed up with wealthy local business tycoons Tan Jiak Kim, Tan Keong Saik and Lee Cheng Yan to form the first joint Singaporean-European shipping enterprise in 1890 – the Straits Steamship Company. A portentous partnership between old world and new, East and West, colonial and local business, this enterprise heralded the future of Maritime Singapore.

This local company morphed over time and became part of today's Keppel Corporation, one of Singapore's foremost multinational corporations and a leader in local and global markets.

In 1866, Chinese shipping companies and ship owners held 120 of the 178 vessels registered under parliament as belonging to Singapore – a dominance that made the formation of Straits Steamship part of a natural progression in the shipping business.

The Chinese partners in Straits Steamship had Malacca roots – they were prominent merchants with shipping associations. Straits Steamship had a prominent part to play in the South-east Asian trade.

### Free-port stimulus and flourishing entrepot

Singapore's free-port status contributed to the flourishing maritime trade and its place along international maritime routes.

Despite persistent tax proposals, the free-trade status proved very attractive – in the years 1868 to 1869, trade increased 416

per cent from the levels of 1823 to 1824. It increased a further 20 per cent with the impact of the Suez Canal opening.

From 1872 to 1874, trade figures hit almost \$90 million. Free trade stimulated growth markets in Europe for Asian products such as sugar, rice, dyes, beeswax and oils and spices and foodstuffs, while at the same time, they opened markets in Asia for European cotton, cast tin and iron, cutlery, firearms, glass, copper ware, verdigris, salt, chalk and flint.

Despite the First World War, the Singapore international and regional trade remained buoyant.

By the time of Singapore's first 100 years of modern history, its trade figures swelled to \$1 billion. Singapore was the entrepot and international capital for the produce of the region, especially for key items like rubber and tin.

### Harbour improvements and growth in trade

By the early 20th century, certain critical improvements had been made to the harbour under the Singapore Harbour Board's administration.

Reclamation works were completed at Telok Ayer Basin and an offshore mile-long mole, a granite rubble breakwater, was completed in 1914.

This gave shelter to up to 40 coastal vessels during the north-east monsoons while the Telok Ayer wharves accommodated coastal vessels which added to port capacity.

At Keppel Harbour, wooden wharves were replaced with concrete ones and King's Dock was completed in 1913. Alongside physical improvements, shipping by-laws and tariff rates and charges were introduced.

Ship-repair facilities also opened in Sembawang at H. M. Naval Dockyard – a portent of a fast-growing shipping industry. Port employment was stimulated.

Indeed, Singapore's growth was not hampered or much affected by the First World War.

The 1929 Depression set in, but virtually left Singapore's trade unscathed.

Straits Steamship even started to convert coal-burning steamers to oil – a technological progression that was modernising the shipping industry before the outbreak of the Second World War.

### The good life decimated by the drama of war

War broke out in Europe in 1941, but the reality of it did not hit Singapore until the Japanese were on the verge of invading in February 1942.

Most vessels evacuating Singapore were picked off and captured or sunk with great loss of life. Singapore fell on Feb 15, 1942.

*The above section was edited by Aileen T Lau for Singapore Nautilus, based on original research and writing by Laure Lau in Maritime Heritage of Singapore, published by Suntime Media Pte Ltd. All copyrights reserved.*

# RISE OF A MARITIME CENTRE

## 1950s-1980s

### Infrastructure

Singapore's shipping industry steadily rebuilt itself after the liberating Allied forces arrived in 1945.

When Singapore took on self-governance in 1959, its leaders gave priority to the strong foundations of the maritime sector by championing labour-intensive jobs – such as ship repairing and ship building – to answer the need for employment.

July 1967 marked the government's bold decision to build a \$77 million container terminal at East Lagoon (now known as Tanjong Pagar Terminal). Upon hearing that third-generation container ships were being developed, the government upped the sizes of the terminal's berths, pushing construction costs to \$137 million.

The Tanjong Pagar Terminal was formally opened with the welcome of its first container ship, the *M.V. Nihon*, in 1972. With the only

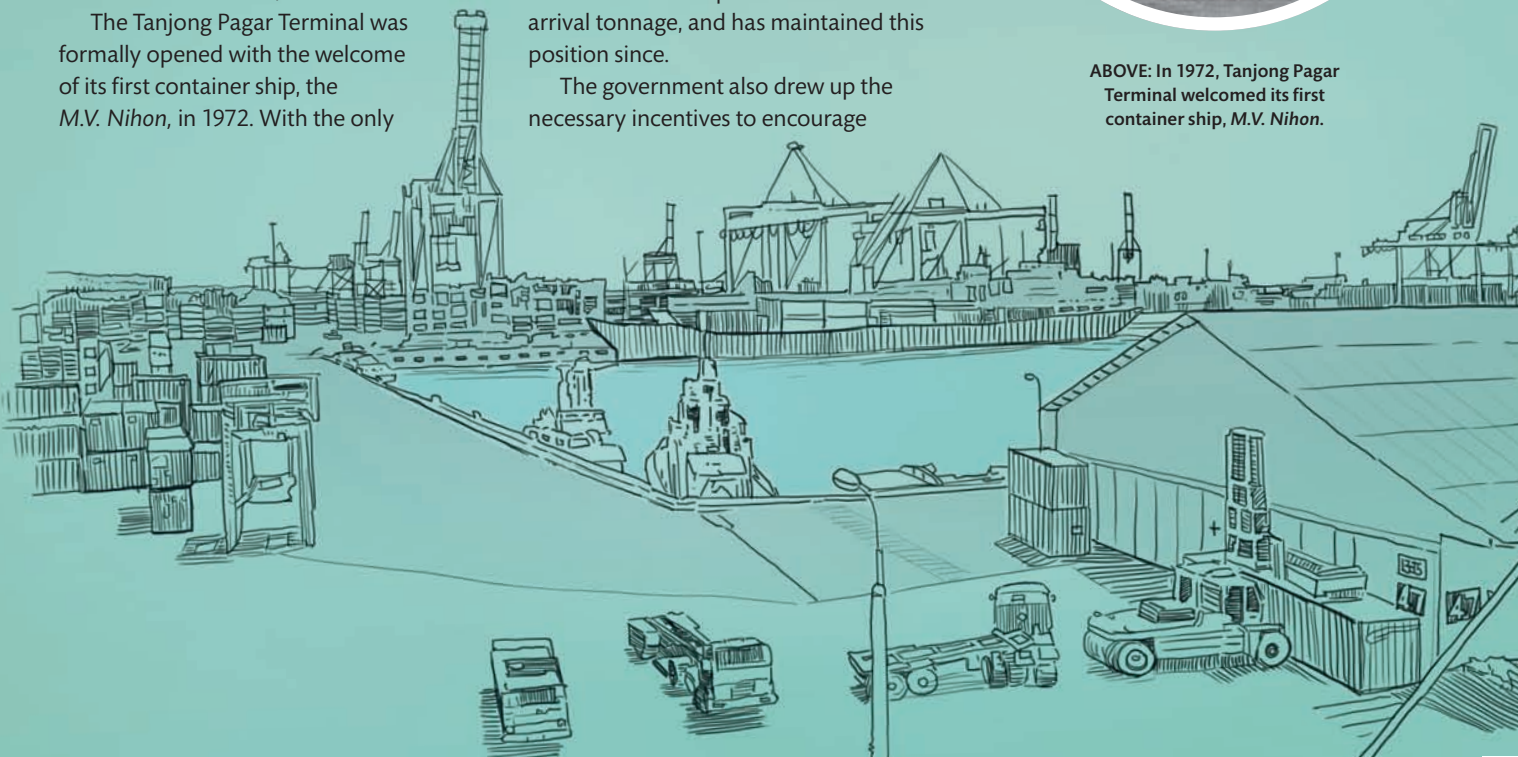
dedicated container facility in Asia besides Japan, Singapore managed to ride the first wave of the container revolution to great success. In the first six months of operation, equipped with only two quay cranes, the Tanjong Pagar terminal handled over 24,000 twenty-foot container equivalent units (TEUs).

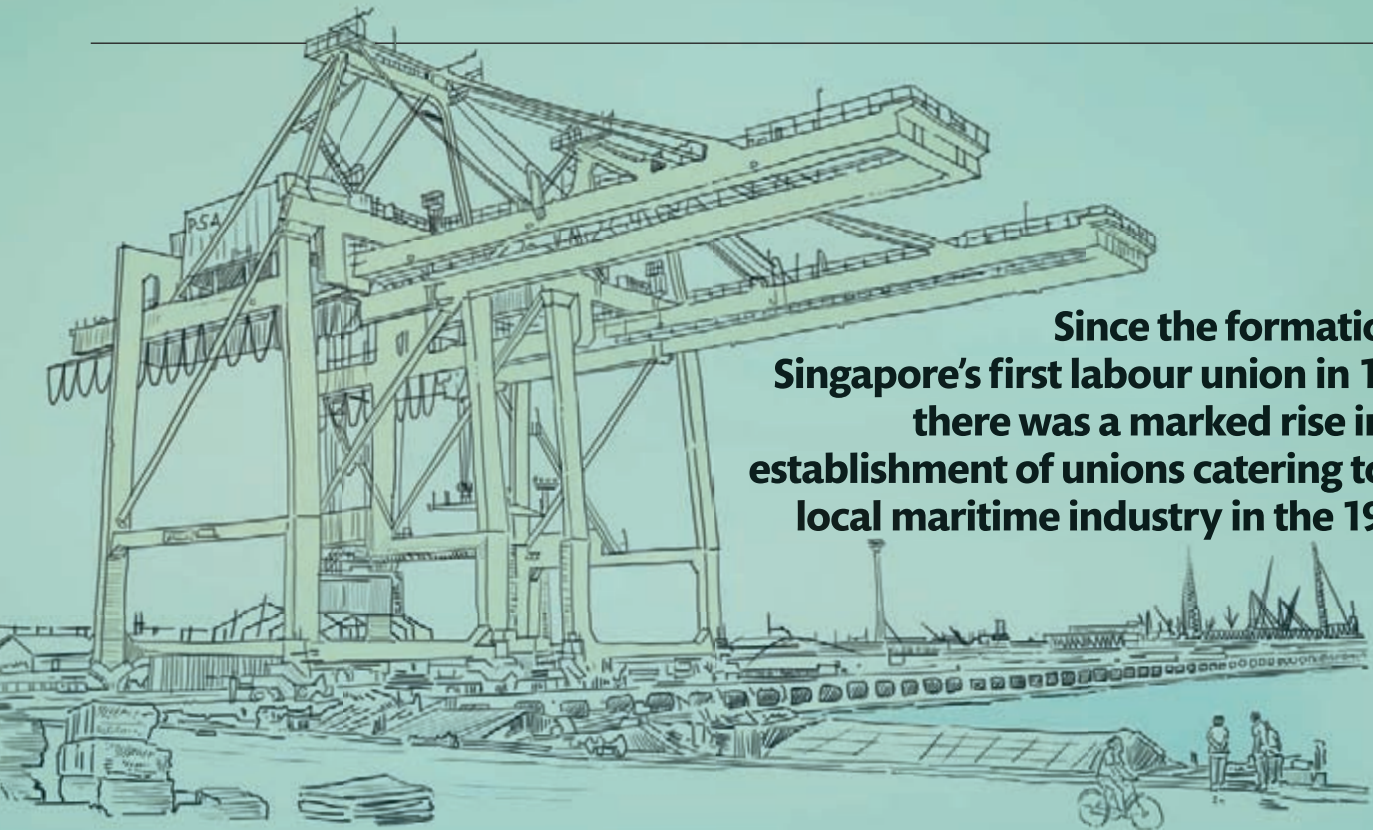
In 1985, Singapore saw a total of 264 million gross tonnes in annual vessel arrival tonnage, just 2.3 million gross tonnes behind Rotterdam. The next year Singapore overtook Rotterdam to become the world's busiest port in terms of vessel arrival tonnage, and has maintained this position since.

The government also drew up the necessary incentives to encourage



ABOVE: In 1972, Tanjong Pagar Terminal welcomed its first container ship, *M.V. Nihon*.





**Since the formation of Singapore's first labour union in 1946, there was a marked rise in the establishment of unions catering to the local maritime industry in the 1950s.**

entrepreneurship, and take equity stakes in key enterprises. From a small regional ship repair nation employing 9,400 in 1960, the maritime sector became the largest employer in the private sector with 20,000 on its payroll by the mid-1970s.

### Major players

The year 1963 saw the formation of Jurong Shipyard Limited, jointly owned by Temasek Holdings and Ishikawajima-Harima Heavy Industries, and this first Singapore-Japan joint venture led to many more.

In 1964, the Port of Singapore Authority (PSA) was established and the Singapore Registry of Ships (SRS) came to form in 1966. When it was reported that the British government was soon to close its naval base, Singapore bought the British Royal Naval Dockyard for a token \$1, saving the 30,000 jobs. Renamed Sembawang Shipyard, it was put to work in 1968.

Keppel Shipyard was also formed in 1968, taking over the dockyard department of PSA. The year also marked Singapore's foray into rig building, with the completion of the nation's first jack-up rig *J.W. McLean* by Far East Shipbuilding.

1968 was significant for Singapore. Its national shipping line, Neptune Orient Lines, was incorporated in that year. Today,

it is a world leader in container shipping and logistics services, and operates through its two principal brands: APL and APL Logistics.

Another major player in the local maritime industry is Pacific International Lines, which was incorporated in 1967; from a coastal ship owner and operator in Singapore, it is now one of the largest ship owners in South-east Asia.

### Associations

Many associations also sprang up over the years. The Association of Singapore Marine Industries (ASMI) was established in 1968 as a non-profit trade organisation promoting and representing different sectors of the Singapore marine and offshore industry. The Singapore National Shipping Association (SNSA) was inaugurated in 1985 and is now known as the Singapore Shipping Association (SSA). It changed its name in 1997, with a new mandate to promote Singapore as a premier maritime centre.

### Rise of the unions

Since the formation of Singapore's first labour union in 1946, there was a marked rise in the establishment of unions catering to the local maritime industry in the 1950s.

In 1951, the Malay Marine Officers

Association, later renamed as the Singapore Maritime Officers' Union (SMOU) was formed.

Besides, the National Trades Union Congress (NTUC) also set up the Singapore Organisation of Seamen (SOS) in 1971 to further improve wages and working conditions of seafarers.

### International stage

Today, the idea of Singapore as an "International Maritime Centre" remains a watchword on the minds of the maritime community, and to think it was actually planted during the recession of the mid-1980s.

At that time, the Economic Committee was appointed under Brigadier-General Lee Hsien Loong, then Minister of State for Trade and Industry, with the task of identifying Singapore's competitive strengths and shortcomings to strategise the next 10 years. The committee worked with then Trade Development Board, now International Enterprise Singapore, to develop an international maritime programme to change the face of Singapore's maritime industry.

Changes included lowering SRS registration fees, reducing red tape, offering more competitive services and organising promotional trips overseas.

Today, the Singapore maritime industry consists of some 5,000 companies, employing more than 170,000 people, and contributes to about 7 per cent of Singapore's gross domestic product.

### Regulatory body

In 1996, the Maritime and Port Authority of Singapore (MPA) was formed on Feb 2 by merging the National Maritime Board, Marine Department and regulatory departments of PSA. PSA was restructured as PSA Corporation Limited in 1997.

### A growing port

With the commissioning of Brani Terminal in 1992, Singapore continued to develop its port and facilities. The first phase of Pasir Panjang Terminal became operational in 2000.

In 2007, MPA also commenced the development of Pasir Panjang Terminal Phases 3 and 4, to answer the growing need for more facilities for the Port of

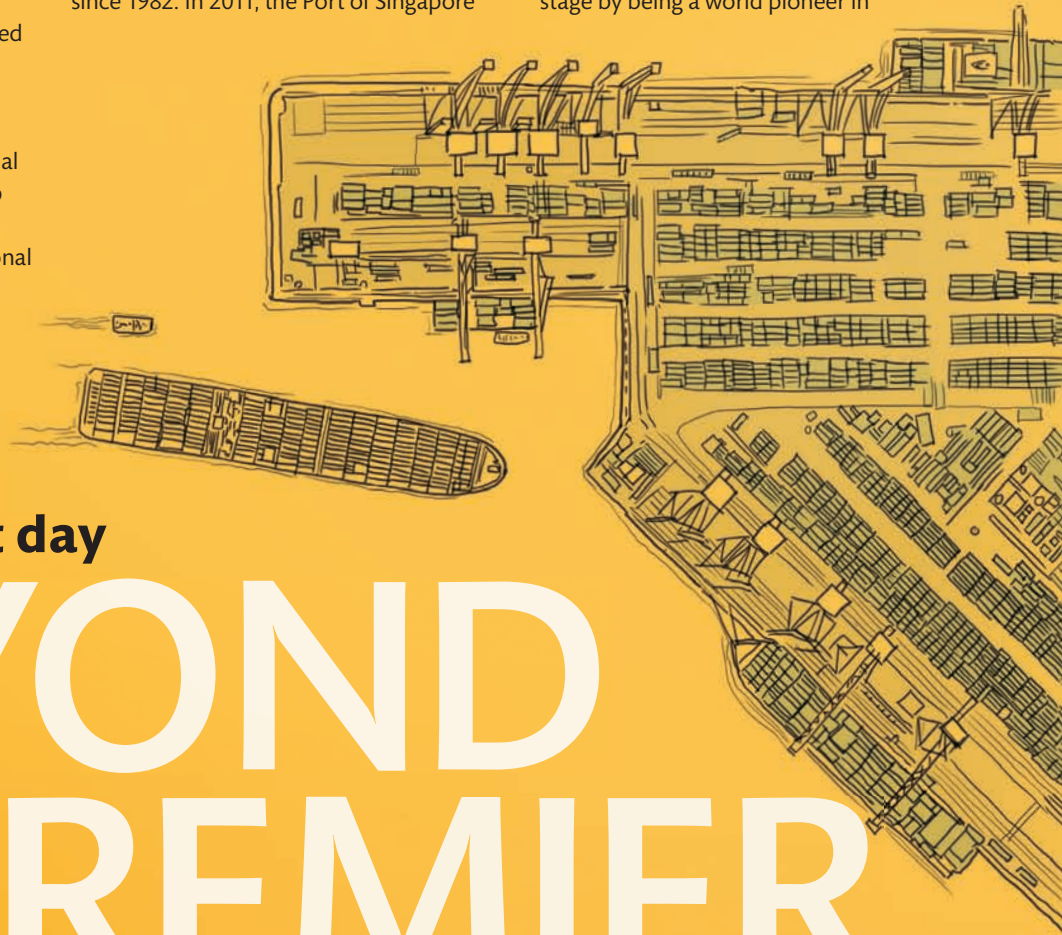
Singapore. Expected to be completed after 2014, the project will enable Singapore to expand her container handling capacity by an additional 14 million TEUs.

The Port of Singapore made maritime history in 2004, when total vessel arrival tonnage crossed the one billion gross tonnes mark for the first time. From then on, the port has continued reinforcing her position as the busiest port in the world since 1982. In 2011, the Port of Singapore

achieved over two billion gross tonnes in vessel arrival tonnage.

### Bunkering

Since the replacement of coal by bunker fuel, Singapore's presence in the bunkering sector has remained a formidable one. From 1997 when the SS CP60 was established, Singapore has constantly represented itself on the international stage by being a world pioneer in



## 1980s to present day

# BEYOND A PREMIER GLOBAL HUB PORT

developing bunkering standards.

In 2008, MPA and SPRING Singapore jointly launched the Singapore Standard SS600: 2008 – Code of Practice for Bunkering, and it has since gained recognition under the International Organisation for Standardisation, and become a model for bunker delivery in other countries.

MPA also sought to streamline the bunkering licensing scheme in 2010, which entailed a single renewal process for bunker supplies and bunker craft operators, and a three-year licensing period for eligible companies.

### E-services

MARINET, an Internet-based e-commerce platform, was launched by MPA in 1999. The system offers electronic access to almost a full suite of MPA's services to the maritime industry. As of 2011, it sees over 800,000 transactions a year.

### Policies and initiatives

Singapore also continues to keep up to date with the international maritime

community by pulling its weight in international issues of safety and security.

The year 1993 saw Singapore elected into the council of the International Maritime Organization (IMO), which strives to promote safe, secure and efficient shipping.

In 2006, Singapore was among the founding members of the Regional Cooperation Agreement on Combating Piracy and Armed Robbery Against Ships in Asia (ReCAAP), which has set up an Information Sharing Centre in Singapore as well.

In 2007, Singapore entered an agreement with Malaysia and Indonesia to establish the Co-operative Mechanism to enhance navigational safety of ships and environment protection in the Straits of Malacca and Singapore.

### R&D and training

To answer the industry's need for strengthening maritime research and development capability in Singapore, the \$100 million Maritime Innovation and Technology (MINT) Fund was established

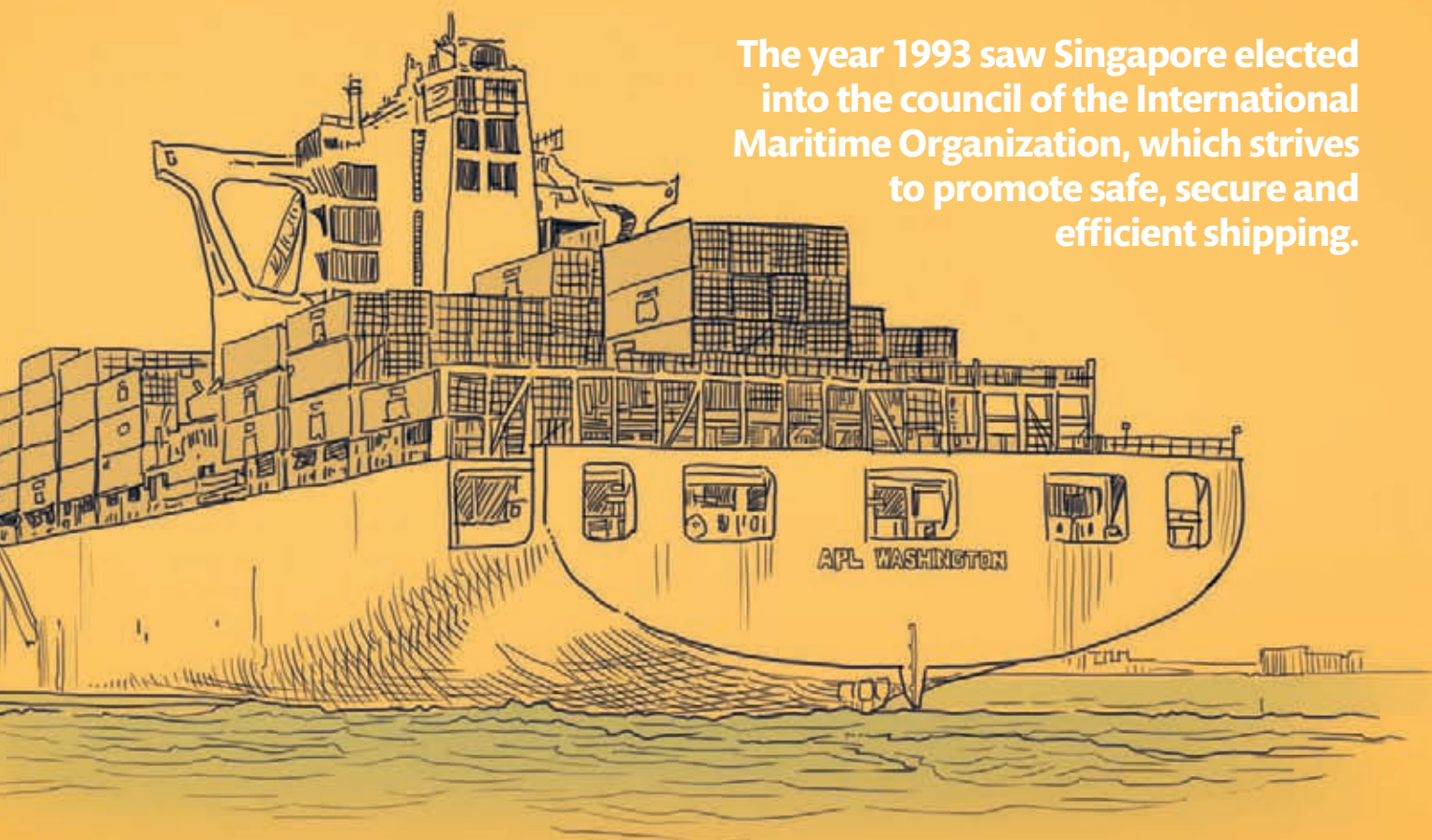


ABOVE: Since the replacement of coal by bunker fuel, Singapore's presence in the bunkering sector has remained formidable.

in 2003. MPA uses the fund to implement various schemes and programmes under its technology framework to meet the ever-growing needs of the local maritime community.

Recognising the industry's growing needs for manpower and development, the

**The year 1993 saw Singapore elected into the council of the International Maritime Organization, which strives to promote safe, secure and efficient shipping.**



\$80 million Maritime Cluster Fund (MCF) was established in 2002 by MPA. The MCF supports training to upgrade knowledge and expertise of local maritime personnel through attending training programmes; encourages companies to invest in the development of talent of their staff through attachments and career development programmes; and encourages all organisations to adopt well-structured HR and training infrastructure, tools and processes to attract, train and develop their talent pool.

Besides, the Singapore Maritime Academy at Singapore Polytechnic was also established to focus on key areas such as navigation, marine engineering, and maritime transportation management.

With the aim of the international development of youths, it has about 915 full-time students and over 1,100 students in its Certificate of Competency (CoC) and short-course programmes.

In 2002, MPA set up the Integrated Simulation Centre at Singapore Polytechnic; today, with advancements in technology helping to hone simulation

equipment, maritime simulation training is compulsory for all seafarers.

In 2011, the Singapore Maritime Institute was formed by MPA, the Agency for Science, Technology and Research (A\*STAR) and the Economic Development Board in close partnership with local institutes of higher learning. Recognising the bright future of maritime, the institute aims to further develop the academic, policy and R&D aspects of the industry.

### Maritime today and beyond

With competition from other nations, and the ever-looming threat of economic uncertainty, Singapore's maritime industry no doubt has to continue propelling its growth forward; Singapore looks to identify strategies through worldwide industry trends, and using these to maintain a competitive edge on the international stage.

In order to be environmentally responsible and proceed full steam ahead for the future of green shipping, the Maritime Singapore Green Initiative was launched in 2011 by MPA.

At \$100 million, the initiative is aimed at encouraging firms to implement environmentally friendly shipping practices beyond the ones already mandated by the IMO.

It also provides a comprehensive package – comprising the trio of Green Ship, Green Port and Green Technology programmes – to incentivise companies to undertake eco-friendly shipping practices.

The idea of Singapore being an International Maritime Centre for attracting foreign businesses and investments will also remain a key aim of the industry.

In 2006, MPA launched the inaugural Singapore Maritime Week, which promotes Singapore as a thought leader and serves as a platform for the international community to gather and discuss pertinent maritime topics.

By identifying and implementing strategies to stay on top of pertinent global issues, the future of Maritime Singapore is bright, and no doubt poised to write many more pages in its already deep-seated and proud heritage.

## SINGAPORE MARITIME GALLERY OPENS

To find out why the maritime industry is a vital part of our past, present and future, Singaporeans can now head to the newly opened Singapore Maritime Gallery.

Visitors will get a keener sense of the different aspects of Maritime Singapore through the gallery's thought-provoking showcase of Singapore's maritime heritage, coupled with an introduction to the local maritime industry through informative exhibits and interactive displays.

The centrepiece of the gallery is a giant ship model of the Port of Singapore, leading to a financial cityscape representing Singapore's International Maritime Centre. A functioning ship bridge simulator

also awaits visitors who might want to experience first-hand steering a ship under various weather conditions. These simulators are used to train seafarers.

Located at the Marina South Pier, the new gallery also spotlights

the exciting careers available in the maritime industry.

The Singapore Maritime Gallery's opening hours are from Tuesdays to Sundays (9am to 5.30pm). It is closed on Mondays (except on public holidays). Admission is free.



While other banks are giving up their shipping portfolios in these uncertain economic times, HSH Nordbank is taking a bold step against the grain. As of January this year, it has decided to focus all its international efforts in ship finance and nothing else.

"It might be mind-boggling to some, but we have been doing ship finance for the last 75 years and have developed a deep understanding of the business. We want people to know they can expect commitment and partnership from us," says Lee Keng Mun, HSH Nordbank's Head of Shipping for Asia.

### Coming out of the storm

Commitment remained the watchword throughout the rough patch that the bank experienced from 2007, when many other large financial institutions faced the threat of total collapse. In the face of financial difficulties, the bank lacked the means to invest in many portfolios, thereby significantly reducing its exposure in the market.

A difficult period of rebuilding followed, forcing the bank to restructure and resize. Leaving real estate, energy and infrastructure to its headquarters

and giving up object-related aviation financing, HSH Nordbank strategically reorganised its offices in Greece, the US and Asia to focus solely on ship finance. This would allow the bank to bring a regional balance to its portfolio in Germany.

### Back to basics

In its early days as a *landesbank* (German for a savings bank), HSH Nordbank typically financed the small to medium-sized owners, and was able to forge a much closer relationship between banker and owner. Over time, as the bank expanded, such direct relationships inevitably waned and became less personal.

Going back to where it all started, HSH Nordbank's new mission comes with a new motto – Strong for Entrepreneurs – which identifies owners as today's entrepreneurs.

"We don't believe in just financing the asset. In fact, we want to support the owner/entrepreneur 'behind' the asset and his business model. Financing should tie in with his assets and growth strategy. By growing, building and strategising with these

owners directly, we will be in a better position to influence their strategies and, hopefully, be part of their plans from the start," adds Lee.

In a climate where midway withdrawal of support from a bank is not unheard of, owners naturally welcome this move. Lee believes that maintaining close dialogues with clients will be key to building strong ties and long-term partnerships.

### Aiming for win-win partnerships

HSH Nordbank is now represented in Asia by a branch office in Singapore and a representative office in Hong Kong. Led by Lee, the team of four manages both offices with the help of its support services.

"I joined with a very clear mandate – to build a strong team and grow the right client portfolio. We may have lost some people along the way, but I think we are heading in the right direction. It has been a challenge, but I believe challenges offer us room to grow. From every crisis, there's something different we can learn," explains Lee.

"Although our team within Nordbank is fairly new, we come with vast

# BACKING ENTREPR

RESTRUCTURED AND RESIZED, HSH NORDBANK NOW NAVIGATES A FOCUSED COURSE OFFERING GREATER SUPPORT TO SHIOWNERS. [BY THAVA RANI](#)

experience from outside the bank. We intend to stay our course by diving deep into relationships and building strong foundations. Strengthening our product range by localising it to be relevant here is also on the cards," reveals Lee.

"Nordbank believes in grooming the next generation of ship financiers and helping local companies. We will continue to play an active role to help promote the local maritime industry. If foreign shipowners and other maritime players get the necessary support and set up base here, then it's good for

everyone because the maritime cluster grows," he says.

With Singapore's position as an international maritime hub and its accompanying critical mass of owners, brokers, insurers, lawyers and bankers, Lee believes Nordbank is well placed for growth in Asia. However, it is still choosing a progressive, rather than aggressive, path to success.

Lee adds: "The state of the current market is not helping, so it's going to be challenging. How we're going to deal with it is to stay close to our clients.

We also want to be proactive by identifying opportunities and any impending problems to see if there's anything we can do to help clients through them. These are customers we have identified as survivors (and some potential winners), so we don't want to see them going down."



# ENEURS



# WINDS OF

LEON MUHAMAD, SECRETARY GENERAL OF THE MINISTRY OF TRANSPORT INDONESIA, TELLS JACQUELINE CHIA WHAT NEEDS TO BE DONE TO PROPEL INDONESIA'S MARITIME INDUSTRY TO GREATER HEIGHTS.

► Taking on the task of propelling a country's maritime growth is definitely not for the faint-hearted, but Leon Muhamad, Secretary General of the Ministry of Transport Indonesia, and concurrently Director General, Directorate General of Sea Transportation (DGST), is determined to make this happen.

In fact, tackling the lack of infrastructure in the country's maritime industry was one of the first goals laid out by him when he was appointed director general last year. The Indonesian government has also allocated 117 trillion rupiah (about S\$16 billion) from the Master Plan for the Acceleration and Expansion of Indonesia's Economic Development (MP3EI) to increase maritime infrastructure.

"One of the main problems in Indonesia is the lack of infrastructure for the maritime industry, especially ports. Increasing the number of ports across the country is our main priority at this point, so that we can better facilitate the import and export industry within Indonesia," explained Leon.

He was here at the beginning of the year as part of the Maritime and Port Authority of Singapore's (MPA) Distinguished Visitors Programme, which seeks to engage senior maritime personalities who are key opinion makers in the international maritime community.

During his visit, he stated his goals of building an industry that can efficiently transport cargo across countries, and ensuring that a strong logistic system is implemented to get goods to all

Indonesian islands (numbered at 17,508 by *The CIA World Factbook*). His other priority is the development of Indonesian talent – from shipping crew to cargo management personnel – to run these projects.

### Close ties

A flourishing maritime industry in Indonesia would also help Singapore, since both countries share common strategic aims in various maritime areas, including maintaining and enhancing safety of navigation in the Straits of Malacca and Singapore, as well as maritime training and education.

During his visit, Leon met with Minister for Transport Lui Tuck Yew and MPA's senior management, including Chief Executive Lam Yi Young, to discuss key maritime issues of mutual interest. On the agenda were the Cooperative Mechanism on Safety of Navigation and Environmental Protection in the Straits of Malacca and Singapore, cooperation of the Tripartite Technical Experts Group and the Training Memorandum of Understanding signed by the DGST and MPA.

"Indonesia is a strategic maritime partner to Singapore and we have strong partnerships with Indonesia in many areas of the maritime sector. Through this visit, we hope to further reinforce our bilateral maritime ties," said Lam.

In turn, Leon expressed his hope for a meaningful exchange of ideas with MPA, in terms of technological expertise and development of facilities and infrastructure of the port. He also stressed

that Indonesia welcomes Singapore investors with open arms.

### The road to success

Leon's road to success is one of hard work and perseverance. Growing up in Padang, he moved to Jakarta in 1973 to pursue a career in the maritime industry. In his 20-year career with Indonesian's key maritime regulatory bodies, he has served as the head of port administration in several parts of Indonesia before becoming director of Sea Traffic and secretary for DGST. In July last year, he assumed the role of director general and was recently promoted to secretary general.

Leon added: "My career has been an exciting and interesting journey. I hope to drive Indonesia's maritime economic development, especially in the area of human resources. I feel the industry needs to develop a much larger talent pool. So far, we have initiated educational projects – building more training institutes and centres to train seamen and logistics crew, too."

He cited previous Indonesian presidents Suharto and Sukarno as his figures of inspiration and is thankful that his father, a textile businessman, always encouraged him to follow his dreams, which consequently led to his achievements today.

Reckoned Leon: "It's always important to be disciplined and tough, because there are both emotional and physical hardships involved in building a career. People should also be independent, but keep in mind that they are part of a team."

# CHANGE



Patrick Phoon will not be sad to see the end of 2012.

For shipowners, this year has been a dismal one on the business front and there is no one better to say so than Phoon, President of the Singapore Shipping Association (SSA).

"The first half of 2011 was a party compared to the nightmare of the second," says Phoon, 60, also Deputy Managing Director of Evergreen Shipping Agency. "I do not think 2012 could be worse than the previous year, but we are just praying that we can get over 2012 as soon as possible."

### The ancient mariner

Phoon has been serving on the SSA Council since 1991 and is its longest-serving member, to which he makes a quip by referencing a famous poem by English poet Samuel Taylor Coleridge: "I've been around for so long, I'm like the ancient mariner."

First formed as the Singapore

National Shipping Association in 1985, the SSA currently boasts a membership of 437 member companies (as of Aug 1, 2012). They comprise shipowners, operators, ship managers, ship agents and other ancillary companies, such as shipbrokers, classification societies and shipping bankers, among others.

To achieve its objectives, the SSA promotes the interests of shipping in Singapore and internationally, and cooperates with other regional and international shipping organisations to protect the marine environment and promote freedom and safety at sea.

It was a geography teacher who first introduced Phoon to the idea of sailing when he was a student at St Joseph's Institution. He started his maritime career at 18 as a cadet officer on vessels, spending months at a time on board and sailing to ports in China, Japan and Africa.

"Those were the best years of my life," muses Phoon. "It was freedom! My mother wasn't there to tell me what to do and I

got to see places and meet people, while being paid for it."

Phoon went onshore in 1973 to further his career by learning the various administrative and management facets of shipping at the now-defunct Leo Shipping. Moving on to RTW Shipping (now known as Evergreen Shipping Agency), he was asked to be the company's SSA representative.

In all his years at the SSA, Phoon has played a key role in promoting the interests of its members. Part of that involved working with various government and non-government organisations. He has also seen the SSA grow from an organisation with a domestic focus into one with international connections and interests.

### The SSA's milestones

Helping the association find a permanent home ranks high on Phoon's list of memorable experiences. He fondly remembers being present at Amara Hotel

# WEATHERING A TOUGH YEAR

PATRICK PHOON, PRESIDENT OF THE SINGAPORE SHIPPING ASSOCIATION, TELLS **WONG SHER MAINE** ABOUT THE ORGANISATION'S MILESTONES AND CHALLENGES, AND WHY HE HOPES FOR 2012 TO BE OVER SOON.



to successfully bid for the site where the SSA now stands – at a shophouse on Tras Street. “You must understand, as an association, we cannot just do what we want. We have to convince our members, seek their approval, raise funds and oversee the renovations. It takes a lot of time, but it’s very fulfilling,” Phoon adds.

Another high was when the SSA successfully lobbied for the Asian Shipowners’ Forum to set up its permanent secretariat in Singapore. It is now based at International Plaza. “Its presence here enhances Singapore’s position as a maritime centre,” says Phoon.

### Reaching out

In 2005, the SSA spearheaded a young executives group, which now comprises over 800 members under the age of 45, who gather for regular events such as educational talks, networking sessions and community outreach activities. “We want to engage young people to build their passion for the maritime industry.”

On current challenges, Phoon cites a common public misconception. “People perceive shipping as a dirty job, and this is a myth that we are trying to debunk.”

Indeed, the SSA works hard to encourage graduates to join the maritime industry, through career talks and visits to maritime facilities to showcase the diverse and exciting opportunities which abound.

### Changing mindsets

Phoon is also trying to change the attitudes of industry veterans. He feels shipping companies have to get ready to ride the economic upturn by reviewing their processes and continuing to encourage growth.

“We really need to work smarter, put more emphasis on thought leadership and be more proactive. We cannot possibly learn anything by doing the same things over and over again.”



# MAKING WAVES

*SINGAPORE NAUTILUS TRACES PSA'S ILLUSTRIOUS PROGRESS AS 2012 MARKS 40 YEARS OF CONTAINERISATION IN SINGAPORE AND 15 YEARS OF THE COMPANY'S CORPORATISATION.*



When Singapore decided to build South-east Asia's first container terminal, the project was described as "one of great faith and courage". At that time, there was hardly any commitment to fully containerised operations on the Europe-Far East route. Tanjong Pagar Container Terminal opened on June 23, 1972 to much fanfare, and also welcomed the arrival of *M.V. Nihon*, the first container ship to berth in Singapore.

Forty years on, terminal operator PSA has much to celebrate. It now operates the world's largest trans-shipment hub – PSA Singapore Terminals, which handled 29.9 million TEUs (twenty-foot equivalent units) of containers in 2011.

This year, PSA is also marking another significant milestone – 15 years of corporatisation. "We transformed ourselves from a government statutory board to a world-class business entity. Corporatisation permits us to respond to ever-changing market requirements

with greater flexibility," says Tan Puay Hin, Regional CEO Southeast Asia, PSA International.

Corporatisation has also helped power PSA's expansion far beyond Singapore's shores. In 2003, PSA International was created as the main holding company for PSA Group, to manage and grow its global network. It currently has 29 port projects in 17 countries spanning Asia, Middle East, Europe and the Americas.

At its home base, PSA has capitalised on Singapore's excellent location at the crossroads of world trade. Customers can leverage on its connections to 600 ports, and daily sailings to every major port in the world.

There is more to its success than just geography. The ability to deliver reliable, efficient and highly productive services to add value for its customers is one of PSA's key success factors. That includes being able to serve the world's



ABOVE: PSA has been a leader in applying technology in container terminals, pioneering PORTNET, CITOS and remote crane operations.



largest container vessels. In August last year, it added a new productivity record in Singapore of moving more than 11,000 containers in slightly over 35 hours on megaship *MSC Eva* – the highest throughput in a single call.

“These achievements were made possible with our most valuable asset – our people. In an increasingly challenging business environment, the close partnership between management, unions and staff to work as one is key to sustaining PSA’s growth and competitiveness,” adds Tan.

PSA also recognises the importance of a motivated and engaged workforce. It has adopted the Fish! Philosophy since 2006 – a common platform that is simple to understand and easy to

apply across all levels of employees. It emphasises a more people-oriented culture that also draws out fun and attractive aspects of the workplace.

PSA has been a leader in applying technology in container terminals, pioneering PORTNET, CITOS and remote crane operations. It continues to make strategic investments that will enhance Singapore’s premier status as the world’s largest trans-shipment hub. PSA and the Maritime and Port Authority of Singapore (MPA) are also collaborating to conduct research and test new technologies for future container

terminals under the Port Technology Research and Development Programme. A key project is the development of Automated Guided Vehicles.

Tan says: “Innovative technologies and ideas will enhance PSA’s capabilities in providing even better service to our customers. In the longer term, they will also enable us to take our productivity to a new height, and we will continue to add value to Singapore’s attractiveness as an International Maritime Centre.”

## MILESTONES

**1972** Arrival of *M.V. Nihon*, Singapore’s first container ship on June 23. Operations at first container berth commence at Tanjong Pagar Container Terminal.

**1982** Achieves one million TEUs in a single year for the first time. Singapore becomes the world’s busiest port by shipping tonnage.

**1984** Introduces DATABOX, which eventually evolves into PORTNET, a one-stop, 24-hour paperless electronic link with the local port and shipping community.

**1988** Implements CITOS, a proprietary enterprise resource-planning system that coordinates and integrates PSA’s entire terminal operations.

**1990** Crosses mark of five million TEUs a year and becomes world’s busiest container port for the first time.

**1994** Achieves 10 million TEUs in a single year.

**1996** PSA embarks on its first overseas port project in China. In July, Dalian Container Terminal begins operations.

**1997** PSA corporatises and is named PSA Corporation Limited. Reaches the milestone of 100 million TEUs handled since the start of container operations.

**2003** PSA International Pte Ltd becomes the main holding company for the PSA Group.

**2004** Achieves 20 million TEUs in a single year.

**2011** Total container volume handled exceeds 400 million TEUs, with more than 29 million TEUs in 2011 alone.



The ability to **deliver reliable, efficient and highly productive services** to add value for its customers is one of PSA's key success factors.



ABOVE: Arrival of M.V. Nihon, Singapore's first container ship, in 1972.





# BUNKERING AT THE NEXT LEVEL

THAVA RANI CHECKS OUT THE NEW HIGH-TECH SYSTEM THAT HAS RAISED THE BAR OF SHIP-TO-SHIP FUEL TRANSFERS IN SINGAPORE, IN TERMS OF TRANSPARENCY AND EFFICIENCY.



► The custody transfer between the ExxonMobil-chartered bunker tanker *MT Emissary* and container ship *Kota Layang* in July this year marked a new milestone for the bunkering industry in Singapore. It was the first bunker transfer in the Port of Singapore to make use of a mass flow metering system

that has been approved by the Maritime and Port Authority of Singapore (MPA).

#### Plus points

Barge deliveries currently rely upon the "sounding" method (in other words, using a dipstick) to measure the volume of fuel.

"Tank 'sounding' can be

done accurately, but only with disciplined procedures and practices. Many variables introduce complexity to the process which, in turn, reduces transparency," says Jerry Reidy, Global Supply Chain and Technical Operations Manager, ExxonMobil Marine Fuels (EMMF).

Mass flow meters, on the other hand, measure the mass of fuel that is piped into a ship, which reduces the uncertainties associated with fuel density, ambient temperature, frothed up bunkers and other variables like ship and tank geometry. The meter is also equipped with bidirectional capability, which enables back flow to be detected. These features contribute to better measurement integrity during the transfer, thus minimising disputes over bunker quantities.

While the number of such disputes is small, the potential

of escalation is high due to increasing bunker prices. In 2011, 30 cases of bunker-quantity disputes were logged with MPA out of the 66,000 bunkering operations that took place here.

Using a mass flow metering system will enhance transparency and efficiency during bunker deliveries, thus reducing the potential of quantity disputes.

Helping to save time is another advantage of the system. "The mass flow metering system simplifies and introduces efficiency to the entire bunkering process for both the customer and supplier. The system delivers estimated time savings of up to three hours per delivery, compared to tank gauging," shares Reidy.

Additionally, the new system was developed with meter security in mind.

The mass flow metering system on board Hong Lam Marine's *MT Emissary* bunker tanker.

FACING PAGE,  
INSET FROM LEFT:  
Inside the *MT*

*Emissary's* control room; from left: Dr Parry Oei from MPA, Mr Wong Suan and Mr Darrick Pang from ExxonMobil Marine Fuels.



Key components, such as the pipelines and valves on the bunker tanker, now come fitted with tamper-evident seals, ensuring security of the highest practical standard.

#### Collaborative efforts

The successful custody transfer from *MT Emissary* to *Kota Layang* with the mass flow metering system was not achieved single-handedly. Led by MPA and SPRING Singapore, a working group was set up to leverage on technology to enhance the efficiency and transparency of the bunker delivery process. Comprising several industry stakeholders, including EMMF and bunker-tanker owner Hong Lam Marine Pte Ltd, the group came together to research,

develop and test mass flow meters for bunkering applications. Costing \$100,000, the more reliable and accurate mass flow metering system was developed.

Working in close consultation with various industry and technical experts, the group also drew up essential ground plans and procedures governing mass flow meters in bunkering operations. Employing these, the new system underwent several trials on board *MT Emissary* to validate its performance prior to the history-making custody transfer.

Now that its first mass flow metering system is in operation, EMMF will likely implement it within its

**Using a mass flow metering system will enhance transparency and efficiency during bunker deliveries, thus reducing the potential of quantity disputes.**

organisation and gradually extend it to the rest of its fleet. Other bunker craft operators are also likely to make the switch under the encouragement of MPA. At last count, there were 220 bunker tankers in the Port of Singapore.

Dr Parry Oei, Director of Port Services at MPA, says: "As the world's largest bunkering port, Singapore sees more than 40 million

tonnes in bunker sales each year. It is important for us to leverage on technology to further enhance the efficiency and transparency of the bunker delivery process. We have set aside \$1 million from the Maritime Innovation and Technology Fund to support further research, development and test-bedding of mass flow meters for bunkering applications."

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SINGAPORE NAUTILUS EXAMINES HOW DYNAMIC TOOLS LIKE FORWARD FREIGHT AGREEMENTS AND FREIGHT OPTIONS CAN BE UTILISED FOR RISK MANAGEMENT. HERE IS AN EDITED VERSION OF AN ARTICLE BY GUY BROADLEY, DIRECTOR AT FREIGHT INVESTOR SERVICES, A LEADING BROKER OF FREIGHT AND COMMODITY SWAPS.



# MANAGING

# RISK

► Forward freight agreements and freight options are widely traded in Asia, Europe and the US. In terms of participant numbers and liquidity, they are considered mature products and remain popular means of risk management.

This is because they offer a number of benefits not commonly found in the physical freight and commodity markets. These include the ability to easily fix and close out positions, allowing for easy profit-taking and better cash management.

### Introduction to FFAs and options

A forward freight agreement (FFA, also known as a freight swap) is a means of taking a position in a futures (paper) market as a substitute for a forward cash (physical) transaction.

An FFA is cash-settled with no physical delivery. The buyer and seller agree on a freight price, which is settled against an index. The trade is then normally “given up” for clearing, which provides a form of insurance against default by either party.

Swaps and options are traded by shipowners and operators, trading houses and a variety of banks and financial institutions. Shipowners and commodity traders use FFAs and options to hedge their physical freight exposure and practise price risk management. Banks and financials use them as a pure trading play and as cover for their own physical commodity and freight-market exposure.

FFAs also promote price discovery because the forward curves produced by brokers are a good indication of future price direction. Rates can be quoted and secured up to three years forward, but positions can be bought or sold prior to expiry, making it easy

to enter or exit the market as needed.

Freight options are commonly used as an additional trading tool alongside FFAs, which represent the underlying market. Options traders are less likely to utilise these products against physical positions, and options are often a pure financial tool which enables users to take advantage of the dry FFA market’s maturity.

An option is a contract that gives the buyer the right, but not the obligation, to buy (a call option) or alternatively sell (a put option) the underlying instrument at a specified price in the future. The buyer of a call option will benefit from a rise in FFA prices. Conversely, the seller of a call option will benefit from stable or falling FFA prices. The buyer of a put option will benefit from falling FFA prices. Conversely, a seller will benefit from stable or rising FFA prices.

Along with many other financial instruments, traded volumes in both FFAs and freight options have seen a decline in traded volume since the financial crisis of 2008. However, despite the downturn in the physical shipping market, FFAs and options have remained an important part of the risk management landscape.

### Clearing essential to FFA trades

In 2006, FFA trades given up for clearing made up just 15 per cent of the total market. By 2010, that figure had risen to above 90 per cent and remains close to 100 per cent today. A clearing account has become essential to trading in today’s FFA market.

In simple terms, clearing is a process by which a clearing house assumes the financial responsibility to pay one party of the trade, in the event that the other party defaults on the contract.

Clearing is available globally, through the Singapore Exchange, LCH.Clearnet (UK), NOS (Norway but owned by NASDAQ of the US) and CME (US). SGX provides clearing for freight, iron ore, coking coal, container freight and bunker swaps, and is preparing to add freight options to the portfolio.

### Singapore and the FFA market

The city state remains a major FFA trading location and it has increasingly emerged as a centre of liquidity in its own right, with local owners/operators, traders and financial institutions all trading regularly. But despite the growth in the number of locally based players and FFA traders across the Asian region, the market still tends to see greatest interest once the London market opens.

This reflects the continued importance of FFA brokers in bringing together buyers and sellers, with spreads narrowing and price volumes increasing as London joins the day’s trading. This traditional broker role will continue in future, even as the market continues to evolve.

Additional potential for swaps and options trading in Singapore and across Asia is being developed in the parallel derivatives markets in iron ore, steel and coking coal, and in single-tonne bunker fuel swaps. Iron ore, in particular, has become a key commodity benchmark and similar moves towards short-term pricing in the steel market are encouraging the emergence of a “virtual steel mill”, combining freight with input and output costs in the steel supply chain.

Brokers are also reacting to the development of new regulations calling for registration of trades and use of exchanges for swaps clearing, by assisting their clients in moving towards



hybrid voice/screen trading. Broker screens and regulated exchanges, such as CME and The Cleartrade Exchange, are giving traders the ability to hit and lift bids and offers in real time, with straight-through processing to a choice of clearing venues.

The widening scope of products and tools available to traders suggests that freight and commodity swaps and options will continue to play an important role in risk management in the future.

**Additional potential for swaps and options trading in Singapore and across Asia is being developed in the parallel derivatives markets in iron ore, steel and coking coal, and in single-tonne bunker fuel swaps.**





# EYE OF THE STORM

YEARS OF EXPERIENCE WORKING IN THE SHIPPING INDUSTRY HAS GIVEN CAPTAIN LEE FOOK CHOON A CLEARER INSIGHT INTO THE WORKINGS OF MARITIME ARBITRATION. BY JAMIE EE

► Historically and customarily, arbitration has been the recognised and preferred platform for the resolution of commercial maritime disputes. Due to its international nature, the maritime industry likes the enforceability of arbitration awards over court judgement made in any local jurisdiction. *Singapore Nautilus* speaks to veteran maritime arbitrator and consultant to Integral Marine Consultants, Captain Lee Fook Choon, on his exciting work.

### How did you become a maritime arbitrator?

After sailing for 12 years, I started career onshore as a trainee insurance adjuster in a loss-adjusting firm. The job opened my eyes to the wide spectrum and depth of commercial maritime knowledge, which encompasses insurance, ship chartering, ship financing, ship broking, maritime and international law and the arbitration process.

I was passionate about marine insurance and maritime law. Hence, in the early 1990s, I went to the UK to pursue my Masters in Maritime Law and concurrently received training as an arbitrator with the Chartered Institute of Arbitrators.

I was fortunate that, in 1995, I received my first appointment as sole arbitrator in a shipping dispute and, since then, have been given numerous

other opportunities. In 1998, I was elected as a chartered arbitrator. To be fair, it was not as competitive then as it is now for any new entrant to this profession.

### What is a typical workday like?

As a maritime arbitrator, I deal with all kinds of international marine-related disputes – such as those pertaining to shipbuilding, charter party (time and voyage charters), marine insurance, sale-of-goods contracts and international trade issues.

I have to spend most of my time before the computer dealing with interim measures or analysing documentary submissions.

My arbitration work is split between Singapore and Hong Kong. Besides, I also have to monitor and supervise the insurance loss-adjusting work, which is run by other colleagues in Singapore and Hong Kong.

### Any memorable cases?

Some of the parties involved in arbitration are very influential firms and, on occasions, I've got hints that if I do not award the judgement in their favour, the chances of future appointment would be slim.

The overarching desire to be fair and impartial is at times in conflict with the fear of losing future appointments. In the final analysis, the integrity and honesty of a professional

must be able to stand up to the test.

### What are the biggest challenges and how do you overcome them?

I do my best to give adequate time and opportunity to both disputants to present their respective cases. This is not as easy as it sounds because either party may not be fully prepared to face the challenges in the arbitration process.

Such a situation happens quite often when one party is not familiar with the workings of English law, which is the most common governing law in any commercial contract.

To direct such parties to present their cases with reasonable speed and clarity is quite difficult, especially if their lawyers are trained in continental law and not the common law system.

To manage the expectations of both parties who come from different legal systems calls for dexterity in approach, without being seen as biased against any party.

### What qualities should a maritime arbitrator possess?

A calm disposition, without being easily excited, is an important trait. To exert a calming influence and maintain civility in an otherwise adversarial context help the parties stay objective. One must be firm and prepared to exercise the

powers given to the tribunal to keep the parties in line.

An arbitrator must also be able to handle voluminous reading of details. While many of us enjoy reading books and novels, legal documents don't really make for enjoyable bedtime reading – and we are talking about bundles and bundles of them. You must be able to look into all the details and discern what is critical to the case.

Another important quality is good self-discipline and time management skills. This is increasingly important as arbitrators are expected to oversee cases promptly without undue delays.

### Any advice for those thinking of a career in maritime arbitration?

It is my personal view that he must spend considerable time in the maritime industry to build up the necessary specialised knowledge. There is no shortcut.

Having gained the required knowledge and experience, he should embark on legal studies and arbitration or, alternatively, pursue such courses while still working in the industry.

In the area of dispute resolution, rarely are cases resolved through technical knowledge alone. It requires a combination of specialised and legal knowledge to discern the truths from hearsay or mere assumptions.

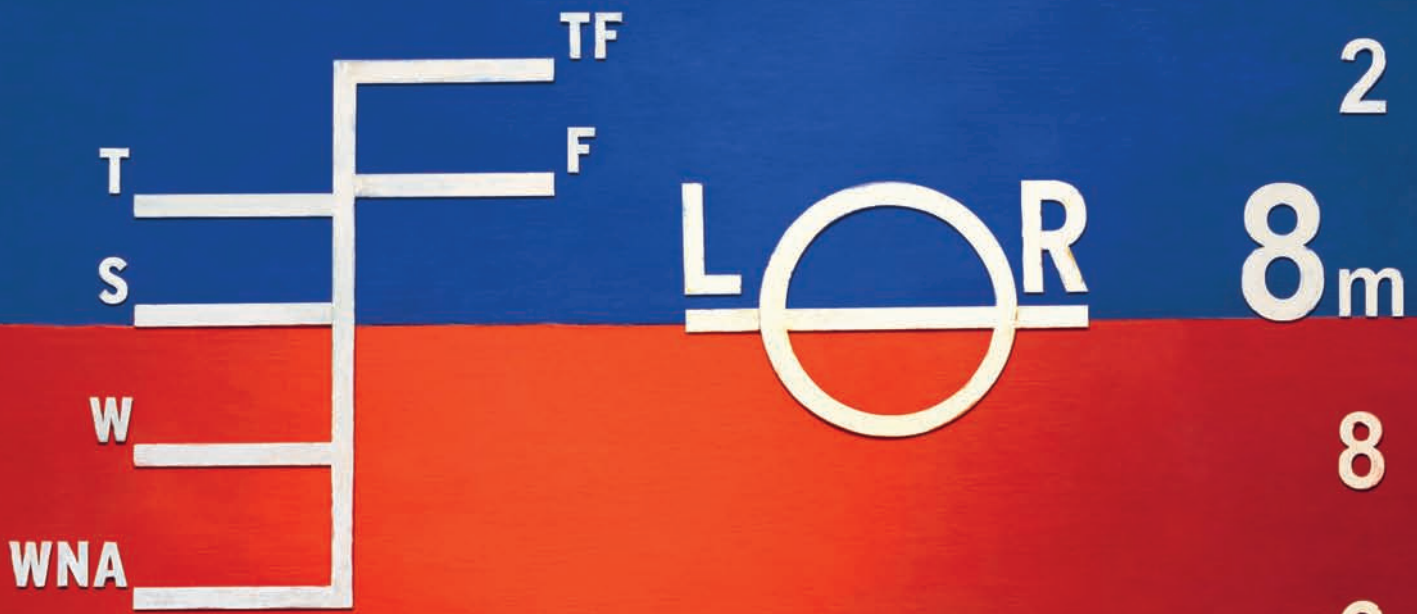


# MARK THIS LINE

THE INTERNATIONAL LOAD LINE SHOWS THE MAXIMUM LIMIT TO WHICH A SHIP CAN BE SAFELY LOADED.

► The International Load Line, or Plimsoll Line, can be found on the hull of a merchant ship. The mark reflects the legal limit to which a ship may be loaded with cargo for specific temperatures and water types corresponding to the season of the year, and the zone or area in which the ship may be operating.

Invented by Samuel Plimsoll in the 1870s, this symbol on the ship must be marked permanently and remain visible even if the paint wears off. The line also ensures that it is easy to spot a ship which has been loaded beyond the stipulated safety level.



- TF : TROPICAL FRESH
- F : FRESH WATER
- T : TROPICAL WATER
- S : SUMMER
- W : WINTER
- WNA : WINTER NORTH ATLANTIC

8  
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4  
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