

LOOKING BEYOND THE PORT FOR NEW OPPORTUNITIES | CYBERCRIME - A THREAT THE INDUSTRY CAN NO LONGER IGNORE | CONSOLIDATION DRIVING CHANGES IN CONTAINER SHIPPING INDUSTRY | TECHNOLOGY ENABLER OF LONG-TERM SOLUTIONS | HUTCHISON PORTS DEVELOPING GLOBAL LOGISTICS SERVICES | IMPLEMENTATION OF REMOTE-CONTROL OPERATIONS IN FULL SWING AT HUTCHISON PORTS | ANNIVERSARY CELEBRATIONS AT HUTCHISON PORTS | IT'S COOL TO BE 'GREEN'

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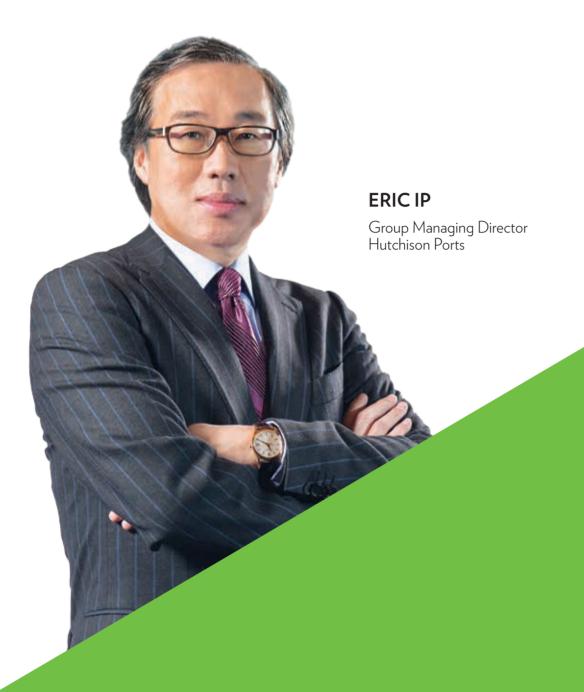
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66 LOOKING BEYOND THE PORT FOR NEW OPPORTUNITIES ?? By the time our readers receive this copy of our magazine **OPPORTUNITY**, we should be approaching year end and I often get questions from the media asking: "How is Hutchison Ports performing in 2017?" and "What can we expect in 2018?"

This year has seen an overall improvement across our network with gateway ports performing particularly well, aided by improving global trade. The major shift in the industry was a further bout of consolidation in the container shipping sector leading to changes in port calls by the alliances, I am pleased to share the news with you that this development did not adversely affect

In fact, given recent trade developments we see moderate growth continuing in 2018 but in the low single digit range, and in our ports cost efficiencies will still be a focus rather than stimulating revenue growth.

Over recent years we have focused on cost savings and improving performance and efficiency. That strategy has been a success and all of our business units are now achieving productivity goals and are financially sound.

We are now poised to take advantage of new opportunities and diversify into different sectors within the supply chain.

We will continue to develop our gateway ports and explore new opportunities so to expand our revenue source into the logistics sector. We will turn our attention to market potential outside of our terminals, mostly in terms of offering a range of services to customers, including domestic warehousing, depots, trucking, rail freight, Customs and inland ports.

We are already offering logistics services in highly developed markets, including Mexico, the Middle East, South East Asia and Europe, and we will devote greater resources to these markets. The aim is to make our terminals the focal point and create 'stickiness' with all of these auxiliary services.

As part of our development in Europe, we are entering into a joint venture to run a breakbulk port in Amsterdam, which will also be handling ro-ro vessels. This is an exciting development as we diversify our business into new areas of growth.

Closer to home we will be expanding our rail freight services at Yantian, with regular direct services from the quay side to connect directly into China's national rail network. In Myanmar the company is offering a total logistics solution for import and export cargo, providing a one-stop service for customers. We see an exciting year ahead as we look beyond the container terminal and move into the hinterland of our ports to seek out new opportunities and broaden the range of logistics services we offer to our customers.

We are also delighted to announce that Hutchison Ports has added three new ports in the Middle East and Africa region, one in Iraq and two in the United Arab Emirates. These ports strengthen our presence along the Belt and Road and there are now a total of 51 ports in 26 countries in our network

We are looking forward to forging ahead with new initiatives in 2018.



The recent much publicised cyberattack on the shipping industry has awoken the transportation sector in general to this salient point: ignore cybersecurity at your peril. The dislocation and economic fallout from the NotPetya attack has undoubtedly acted as a 'wake-up call' to how best contain this ever-increasing threat.

Despite the increased threat level, it seems not everyone is taking matters seriously. At a recent shipping conference held in Singapore, the US Coast Guard warned that unless the industry takes the issue more seriously, governments would be forced to introduce regulation.

Evidence suggests the threat has multiplied and will be an increasing burden to business. Cybersecurity Ventures predicted in a report in 2016 that damages from cybercrime will add US\$6tn in costs to the global economy by 2021. The recent attack on Maersk incurred up to US\$300m in lost revenue, as reported by *The Financial Times*.

But for Jan Waas, Chief Information Officer, Information Technology of Hutchison Ports, there is no doubt that lessons from recent attacks are crystal clear. He stressed, "What we have learnt from this recent attack is you cannot be sure anymore; you really should accept the fact that security measures won't stop all attacks. Just one mistake out of a million and a hacker is in. Therefore, you must now go to some sort of operational excellence on all these things and do a one hundred percent check."

"Even with a one hundred percent check, resourceful hackers may still manage to breach your network," Wass added.

He stressed, "So enterprises should still establish a comprehensive cyber incident response and recovery capability. They should have a Business Continuity Plan and a Disaster Recovery Plan in place."

He did not mince his words, "I think with IT security and cybersecurity, you must act with brute force, like shock and awe, and take it seriously. It is no good knowing about a threat but not acting on it. It is about execution of precautionary measures in a real-time manner."

He suggested businesses now need to allocate more time to this issue. He added, "Yes, perhaps paranoid to the threat and perhaps exaggerated in your acting."

Recent developments have heightened the threat level. Most significantly, the onset of computing as the primary means of communication is a double-edged sword. It has brought great benefits in business and personal lives, but this technology has exposed many commercial enterprises to increased security and commercial threats.

According to *The Economist*, the exponential increase in speed, scalability and efficiency of computers over many decades has undoubted advantages, but its increased complexity, with millions of lines of code, means additional risk: one coding error could wreak havoc on an operational system.

#### < THE ECONOMIST - TWO GUIDING PRINCIPLES TO CYBERSECURITY>

< Principle One >

Take a layered approach to defence

- Walling off different trunks of sensitive data can reduce the impact of any hacks that do breach the outer defences
- Plan in advance how to respond to a hack
- Think not just of prevention, but also pay attention to mitigation and disaster recovery

< Principle Two >

Think about data more intelligently

- · How much data do you need to store?
- · Information is an asset but it is also vulnerable
- · Data can be a source of business and legal risk

Waas explained, "But the positives outweigh the negatives, we embrace these technologies, we cannot live without the Internet anymore, we do not want to get rid of email or online banking. These things give more prosperity but there are risks; which you must contain."

This increased prominence of technology in many areas will without question multiply the vulnerability to an attack and increase the opportunity for computer hackers to infiltrate a wider variety of devices, such as smartphones, the Internet of Things (IoT), and even your home camera, according to Waas.

Waas explained, "These emerging technologies have their inherent risks, so you may want to develop targeted countermeasures when you deploy these new technologies to tackle the technology-specific risks".

This echoes a report entitled 'Cybersecurity Onboard Ships' which highlighted how "the growing use of big data, smart ships and the IoT will increase the amount of information available to cyber attackers and the potential attack surface to cyber criminals. This makes the need for robust approaches to cybersecurity

One critical insight is that ships can be particularly vulnerable to an attack, as multiple stakeholders involved in the chartering of a ship can result in a lack of accountability for the IT infrastructure, the report

Waas backed up these findings and issued a warning of an imminent attack. He stressed, "The more devices getting connected ramps up possibilities for weaknesses. You cannot prevent attacks. They will

such as ransomware need not target mission critical Deputy Head and Chair Professor, Department of Information Systems, Business Statistics and Operations Management, School of Business and Management, Hong Kong University of Science and Technology.

Ransomware often entices users to unwittingly click on emails with corrupted files to download that can then wreak havoc across an entire system, insisted Hui. In these types of attacks hackers create encrypted asking for payment to de-encrypt the data. According to a prominent security negotiator, coughing up and caving in to hackers' monetary demands will place the targeted company on a blacklist, vulnerable to future attack, as reported by WIRED.

By way of response to recent cyberattacks, it is known several shipping lines have updated their security systems and have installed multi-layered protective systems. However, a report by leading market intelligence provider Sealntel revealed almost one half of container carriers have a worrying low level of

Further to this revelation, the fact that there have been few reported high-profile cybersecurity attacks according to Hui.

the logistics sector is not a high-risk group. Quite the contrary, I think its fundamental risk is high because of its heavy reliance on information."

Hui wrote a major report on cybersecurity. He maintains that any organisation that heavily utilises information in its operation or decision making is a potential target. Individual researchers at his university had been targeted and his colleague had fallen victim

He added, "The logistics sector relies on timely and accurate information for coordinating its activities. Hence, the threat is imminent."

A recent high-profile data breach on a major US information company that trades on personal information underlines the vulnerability of IT systems concerns are being raised that if an operation whose raison d'etre is managing data can be so vulnerable, then nowhere is safe.

from the outset, and in the light of recent attacks this requirement is even more critical as the risk perspective has moved up several notches.

He explained what action needs to be taken, "It is a thousand things to be honest - especially designing the systems with security in mind. It is called security by design and applying a lot of technology. Encryption, firewalls and so on; every mature or professional company is up to that standard to a certain extent."

Waas stressed, "Effective firewalls, which establish barriers between different networks, and different layers of protection are needed. The key point about and it will never be one hundred percent solved in the technology only."

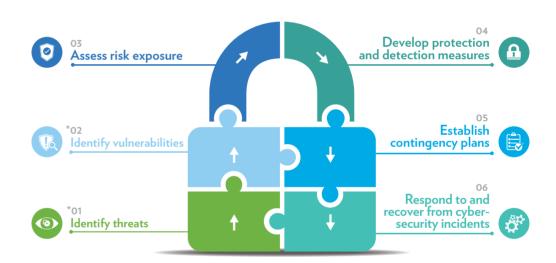
across different systems and also creating awareness

## **MAJOR INDUSTRY REPORT ON CYBERCRIME**

'Cybersecurity Onboard Ships', backed by heavyweight organisations in the shipping industry, including the Baltic and International Maritime Council.

Offering practical advice and management best practice on cybersecurity and cyber safety-related matters, the quidelines in the report are further aligned to recent research and recommendations published by The International Maritime Organisation (IMO).

#### The guidelines suggest a six-stage process for cybersecurity:



#### Threats and Vulnerabilities

#### \*Identify threats

- Activists, which contain within their ranks disgruntled employees
- Criminals who seek financial gain or who are involved in commercial espionage and perhaps may want to sell the data
- Opportunists whose motivation is getting through cybersecurity defences and the thrill of the challenge
- State-sponsored organisations who seek political gain
- Terrorists who want to disrupt national economies and critical infrastructure

#### \*Identify vulnerabilities

"Accountability and ownership for cybersecurity assessment should start at senior management level of a company, instead of being immediately delegated to the ship security officer or the head of the IT department"

Recent major global cyberattacks such as the ransomware called WannaCry, which infected hundreds of thousands of computers worldwide with outdated Windows operating systems, have heightened the levels of awareness of the menace posed by hackers.

This is especially the case since many companies suffer collateral damage from attacks that originally target other companies or even industrial sectors.

Pertinently, Waas conceded that every IT measure has a loophole. However, the way the systems are meshed together with organisational and individual awareness should then eliminate these loopholes. It is imperative to have a restoring strategy to restore your systems and data were these loopholes to be breached.

However, the threat level has undoubtedly increased over recent years in its intensity and sophistication.

Hui explained, "Cyberattack evolves over time and today the hacking profession has transformed in such a way that hacking has become much easier and accessible. There are now hacker-as-a-service and hacking tools such as ransomware that are easily downloadable."

He added, "Underground black markets are abundant too. These imply that attacks can come from anyone and anywhere, meaning the industry must conduct a thorough assessment on the potentially vulnerable points in their systems, including the desktop computers of everyday workers. Security threats resulting from human error is one major factor constantly mentioned by companies in survey after survey."

This is partly down to social engineering motivating many hackers, where personal security information is the desired objective. In many instances, IT system disruption is not obtained by hacking into a system, but by securing a user account and password, often via phishing emails.

Waas explained, "It is amazing how sophisticated these things are. If you project it to a house. They don't want to break into your upstairs window they just want to copy your key. They try to get your key by getting your password, and if they have your password, then they can create mischief."

Waas went on, "So, the whole thing is keeping up your systems, keeping up your password security levels, setting up the right defences, which are all standard practice for any organisation."

This raises an issue that needs to be addressed for many companies involved in shipping and logistics: administrative rights or access rights to emails and the connectivity of all the IT systems.

Waas suggested, "A good network segmentation between the operational processes and administrative processes is needed. And these days the more sophisticated building and equipment automation needs to be reviewed and, if necessary, carefully segmented. It is about creating a more secure environment. Everything gets connected: computers operational across offices; to equipment utilised in the business; through to sensor devices in the operational process; even smart phones of people in the organisation."

Under this present-day scenario where access to company emails is almost universal amongst many company employees, Waas intimated that additional authentication requirements should be introduced.

He warned, "It takes just one person to click on an infected email and a virus can enter your company. Therefore, it makes sense to review access to emails."

He feels there is a need to coordinate a response to the threat as "the more information you can share the more you can understand the future direction of threats going around."

Another major concern is legacy IT systems from the late 1990's which were designed with a different configuration. Nowadays, security by design and application of standard industry best practice are key risk prevention requirements.

Moving forward, the two overriding priorities for Waas are execution of best practice and awareness. "The concept of best practice is fine but do you really act on it? Execute it as if it is a standard, the next day you must benchmark it."

"The other key point is creating more awareness of the potential for these incidents. It is psychology of people, the mindset that makes the difference; the psychology that something will never happen to you.

It is this lack of awareness that most concerns Professor Hui. Cyberattacks fall into the highimpact, low-probability (HILP) category, and an influential report produced by Chatham House, a UK-based think tank, argued many businesses remain insufficiently prepared for such events. That was a few years ago and Hui thinks many businesses remain woefully complacent. Furthermore, he insisted, and echoing a point raised by Jan Waas, rudimentary services are also digitised and supported by computer systems.

He explained, "Firms tend to underestimate the impact while recognising the fact that the probability of being hit is small. Taken together, they tend to under-invest in cybersecurity protection or insurance.

On an optimistic note a major piece of research undertaken by Professor Hui on the Convention on countries experience increased attacks. The implication is that hackers strategically choose targets to minimise their own penalty. In the light of these findings, Professor Hui urges governments to work together to combat this threat.

The main findings of his report imply "attackers in cyberspace are rational, motivated by economic incentives, and strategic in choosing attack targets. However, the evidence is inconclusive whether sharing threat intelligence or software vulnerability within mitigating cybercrime.

For Jan Waas of Hutchison Ports it is a balancing act between the security risk versus the operational side of a business. The key point is to be constantly vigilant to future threats.





01

## What Transported Asset Protection Association (TAPA) says

TAPA's membership includes every type of company or organisation facing the problem of cargo crime within the transportation supply chain.

02

## How serious is the threat of cybercrime to port and terminal operations worldwide?

TAPA regards cybercrime very seriously as these cases allow attackers to access sensitive shipping information, which can be used to commit other crimes or hijack the vessel or trucks being used.

The recent attacks that disabled the ports and infrastructure created significant issues for shippers. Shipments are at risk of loss or theft as well as increasing the logistics costs on their recovery. Members reported that ocean lanes with longer transit times were more impacted than local lanes indicating that there may have been some attempt to cause the most damage possible.

05

Do you feel there are any areas of vulnerability or limitation? Recent attacks on Maersk have highlighted in some quarters this vulnerability – do you agree?

Yes, it would be correct to say that there are and will be vulnerabilities for a period whilst the supply chain catches up with cybercrime and related risks. There are limitations as with any control mechanism however, early detection is the key in defeating or reducing the impact. The recent WannaCry and other viruses created a new paradigm in cyberattacks not seen before on this scale. It is highly likely that the supply chain will suffer another round of attacks and all companies need to fast track their response plans.

06

Lloyds of London recently issued a report highlighting the dangers of cybercrime and suggested many companies are not properly insured against the risk – Do you think this is an issue for the industry to address?

Apart from the banking industry, for many companies, cybercrime operating at this level is relatively new to the supply chain. Overall, IT security has not received the necessary amount of investment or development. It is also unlikely that companies were even insured against these attacks creating unbudgeted expense and impact to profits.

03

#### Have you had any instances of cybercrime?

Yes, TAPA members have reported instances of cybercrime including those impacted with the recent events and cases of fraud where social networking was used to build up a picture of the people in the organisation who had authority to approve purchases or make payments. Several members have reported being victims of these crimes and feel vulnerable as Law Enforcement Agencies remain reluctant or unwilling to record the crime through lack of resources or overseas offenders.

In many cases of the networking fraud, members reported paying out hundreds of thousands of dollars in transferred payments to dubious bank accounts in South Africa, Hong Kong, Romania and even the US.

04

How do you make provisions for the threat of being attacked? Do you feel this threat now needs to be taken more seriously?

In response, many TAPA members have introduced new measures such as additional protocols such as authentication tools but also reviewed their Business Continuity Plans and IT Disaster Recovery Plan. Clearly, there is evidence to support the case that not all companies were prepared, equipped and lack complete awareness of the potential threat. Cybercrime has been on the radar for several years so these events were foreseeable and in some cases preventable.

07

### Is this threat substantially increasing the costs of doing business?

Yes, there is no doubt that the increase of cybercrime related instances will have a negative impact on the cost of doing business.

In the recent coordinated supply chain attacks, the consequences were significant with members reporting millions of dollars of inventory tied up as ports and terminals were unable to carry out customs clearance or process the containers and urgent premium air shipments delayed as IT system data was not accessible and the shipments were either lost or not traceable.

This meant that member companies had to find new carriers and forwarders who were not impacted and were able to provide the recovery services needed. This cost the industry a substantial amount, which is difficult to quantify now.

08

Do you feel there needs to be some coordinated response or strategy to this threat at industry/government/international level?

There is no doubt that cybercrime is impacting the development of technology and related functionality. In fact, it could be said that cybercrime has slowed development in some keys areas of global development and the IoT. The response to these cyberattacks requires a coordinated response from government agencies, leading software companies and industry groups such as TAPA. TAPA has good experience with working with government agencies across the globe, which can help address matters more efficiently and effectively as well as represent members as a lobbyist to ensure government attention.

09

Do you feel customers are adequately protected from the risk if TAPA member's own organisations came under attack?

It is difficult to measure what 'adequate' currently means as the types of Trojans and tools used are highly advanced and developed by some of the best hackers in the world.

TAPA members have recently requested additional support with regards to cybercrime and in the TAPA Supply Chain Standards, information security forms part of these standards. With the increase of cybercrime related instances, TAPA will be reviewing its standards in line with the new threats particularly with Tier 2 manufacturers who are unable to support Enterprise Information Security infrastructure or in-house Security Technicians.



During the last twelve months the container shipping industry has been through a period of consolidation unprecedented in the last twenty years. The outcome of this paradigm shift affects the whole ocean supply chain.

Many analysts are saying container lines have finally turned the corner and return to profitability is imminent during this tumultuous 'watershed' year for many players in the shipping sector. *Drewry Shipping Consultants* predicts ocean carriers will gain US\$5b in revenue during 2017 and recent data released by some liners support these optimistic forecasts. Senior industry figures are now urging shippers to play a long-term game to reap the full benefits of much-needed stability in the container industry.

Ken Chou, Group Commercial Director of Hutchison Ports, welcomes the efforts by shipping lines to turnaround the losses that have plagued the industry in recent years.

"The recent consolidation into three major consortia will bring a more efficient deployment of mega-vessels and the subsequent cascading of vessels on the main east west trades. Hutchison Ports, for its part, has made significant capital investments to improve terminal infrastructure and operating efficiencies in order to meet our customers' requirements and handle larger ships."

On a broader level Chou sees the consolidation as an opportunity and a challenge for container terminal operators and carriers.

"I see an opportunity for the shipping industry to collaborate more effectively on servicing the large volumes as well as complex onward and inland connections within the chain, from port to vessels to door. With less fragmentation, the industry can begin to address common standards to bring further efficiencies through digitalisation," said Chou.

"During the last fifty years Hutchison Ports has built long-standing partnerships with carriers based on our experience, expertise and consistency and we see that as our competitive advantage in today's challenging market."

## END OF THE CONSOLIDATION CYCLE?

Tim Huxley, Managing Director of Mandarin Shipping said: "COSCO's takeover of OOIL may well be the last of the 'big' takeovers as there probably aren't that many candidates for consolidation. There may now be more attention paid to the smaller feeder owners and operators as this has been an area where the major lines have not invested significantly in recent years and where there could be some pressure building in years to come in terms of availability of decent, modern tonnage as the remnants of the KG market finally die off. I don't think there are any significant political undertones here, although you could put together a story that this is all part of the 'Belt & Road' initiative."

"As regards Japan, this is going to help operational efficiencies at the big three and is consolidation without loss to 'Japan Inc'. The Japanese lines have all suffered so this is a fairly logical move driven purely by commercial considerations. Korea is the same, although letting Hanjin go was a wakeup call to the industry that they can't rely on government support. I don't think you can look at all the M&A activity as being driven by 'nationalist' issues. The industry needed consolidation and if the stronger companies are growing by acquisition of smaller competitors, that is perhaps better than the continued growth through ordering more ships which just adds to capacity," concluded Huxley.



#### **2017 LOOKING UP**

One of the main factors behind this year's upturn, according to Martin Rowe, Managing Director, Clarksons Platou Asia Limited, said that this year's "scissoring" of demand versus supply when compared to 2016 when supply was running significantly ahead of demand. His team of analysts in London predicts demand growth of 4.5 percent for containers during 2017, and this is higher than predicted net supply growth of around two percent. These figures, which show a shortfall between demand and supply growth, are backed up by other analysts such as *Drewry*.

Projecting into the near term, Trevor Crowe, Head Specialist Container Analyst, Clarksons Research Services (CRSL) in London, commented, "Our analysts forecast that demand growth for 2018 will be even greater at around five percent, and this trend appears sustainable into 2019."

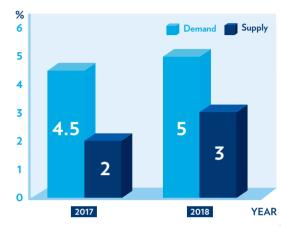
He cited strong trade growth during the first six months of 2017 combined with port congestion behind a sharp improvement in both freight and time-charter rates.

It was recently reported in *The Loadstar* that there are now effectively two tiers for liners in their negotiations for charter rates. Larger carriers consistently obtain better deals, it was claimed.

Crowe continued, "Several liner companies have been hoovering up capacity for new routes, especially in Asia where we expect around six percent regional demand growth for 2017." He added, "Supply growth has slowed – for 2018 we expect it to be slightly higher than 2017 – at around three percent, but that is still tidily below expected demand growth." (Refer to chart)

These statistics and similar forecasts by *Drewry* should bode well for container line profitability. Maersk Line and Hapag-Lloyd both recently reported year-on-year first quarter revenue growth of around ten percent, while other liners have reported strong half yearly uplifts in container volumes. However, analysts at Clarkson Platou remain "cautious" about making too rosy a prognosis, especially given "the calamitous recent past". Rowe urged against potential oversupply by "rushing out and ordering more ships".

### Projected growth in demand versus projected growth in supply for container shipping



Source: Clarksons Research

One interesting point much debated in shipping circles is how the recent spate of merger and acquisition activity, which has seen the number of carriers reduced to eleven, down from twenty not so long ago, will affect capacity and freight rates. Shifting alliance structures has long been known to alter container terminal volumes.

As for capacity, Rowe and his team suggest recent consolidation in the industry will be "capacity neutral", unless "the move is part of a larger 'masterplan' which is combined with newbuilding ordering."

Rowe then turned to market rates, "Overall we expect a gradual firming in box rates. Time-charter rates for vessels supplied by non-liner shipowners are also likely to gradually improve for the right types, especially the Neo Panamax class."

The analysts have predicted an average upturn in rates of about sixteen percent across all routes during 2017, and in the light of these forecasts, *Drewry* now suggests shippers should rethink their space-procurement strategy and consider alternative options. Exactly how they advise shippers to respond remains unclear.

The container sector has seen plenty of turmoil over recent years, and Rowe believes shippers are naturally wary of post-consolidation rate hikes. He considers the possibility of rates shooting up unlikely as the container market remains competitive, despite the recent bout of mergers.

However, he suggested shippers were partly to blame for previous fluctuations in rates through behaviour which could be described as myopic.

To illustrate his position, he cited a recent episode in shipping history – the collapse of a South Korean container line – when shippers acted in a way which could be deemed short term and counter-productive. He explained, "To some extent it was their relentless determination to drive rates down which resulted in the 2016 Hanjin bankruptcy – stranding many shippers' cargo for weeks on end during peak season."

Rowe then explained why rates then shot up, "The subsequent snap back in rates because of the sudden withdrawal of substantial capacity from the market left shippers paying more than they had budgeted to shift their boxes in the first quarter of 2017."

He urges shippers to adopt long-term strategies, "To work with reliable long-term liner partners and recognise that a high level of service is still something worth paying a premium for. This is likely to be a wiser policy for shippers."

Rowe remains upbeat about container demand moving forward into the longer term, citing the march of "global inter-connectedness" and trade growth as prevailing trends, with only economic nationalism, on-shoring and 3D printing as possible growth dampeners. The full consequences of the Panama Canal widening project are yet to be played out, but this could cause a further realignment of traditional container trade flows, he pointed out.

Despite recent industry optimism, Steve Saxon, partner, McKinsey & Company warned that the wave of industry consolidation in shipping lines is far from complete, and that market fundamentals necessitate a further drawing together of container lines. He believes that the spectre of oversupply will hang over the sector for at least another ten years and liners will have to adapt to an ever-increasing range of challenges.

Although he suggested there were grounds for optimism with a continued upswing in demand, projected at around four percent per year over the next few years versus an anticipated supply growth of two percent per annum beyond the existing order book, the supply-demand gap will take ten years from today to close. Rates are expected to moderately increase as the supply-demand gap narrows, but margins remain under pressure while they continue to hover near all-time lows.

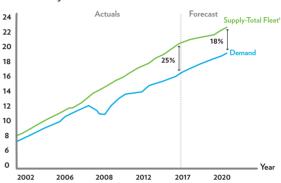
Saxon believes there presently exists about twenty five percent oversupply in capacity and this issue presents numerous challenges. He explained its political undertones, "Chief bogeyman is the shipyards. They employ thousands of workers and are a fundamental component of many economies. It is inevitable that ways will be found to increase orders for new ships."

#### ssumptions

- Demand for container trade grows at 4% p.a. from 2016 onwards
- Supply will grow at 2% p.a. beyond existing order book

#### Global Container Shipping Volume

#### TEU m Standing Slots



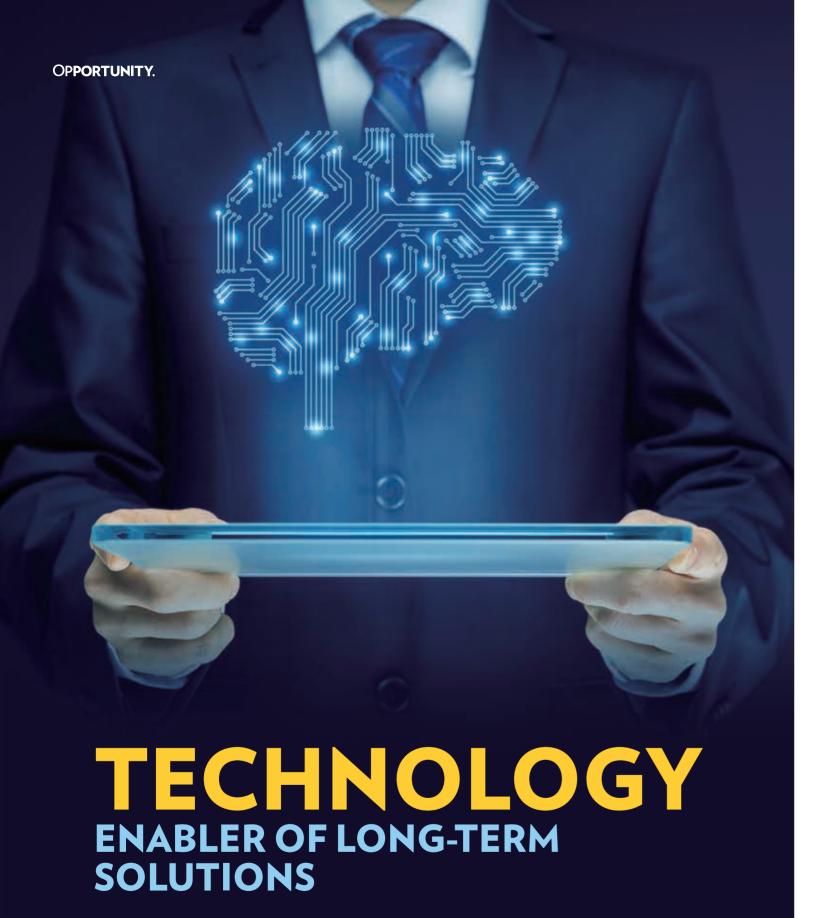
Source: Global Insight for macroeconomic indicator outlook; McKinsey Container Model and team analysis

- Oversupply of ships puts pressure on margins through reduced prices
- Prices would moderately increase as supply-demand gap closes
- Supply-demand gap likely to take about 10 years to fully close from today

The scenario in shipping is a perfect illustration of what in economic parlance is referred to as the 'Tragedy of the Commons' – a shared-resource scenario where what is good for an individual may not be beneficial for the group. In shipping terms, the shared resource is access to the high seas; and while it is rational for container lines to order new ships to meet growing demand, it is irrational at an industry level as it has led to massive overcapacity.

Analysts at Alphaliner appear to echo some of the sentiments expressed by McKinsey & Company and recently warned that "only fully-fledged consolidation" could overcome the disadvantages inherent within the newly created South Korean consortium, such as lack of scale and fragmentation, as reported in *Splash24/7*.





Ports and the shipping sector in general must embrace new technology to cope with the everrising demands of increasing global trade. Technology can be the key provider of solutions to customers' rising expectations and expanding container traffic, and this will ultimately add to the long-term profitability of the industry. That's the key message in a wide-ranging interview with Jan Waas, Chief Information Officer, Information Technology of Hutchison Ports.

As new technology and the onset of digital solutions are disseminated across many aspects of commerce, Jan Waas recommends that the shipping and ports sector must reach out and utilise each available tool that smooths the operational process across global operations to increase the user and customer experience.

This is particularly important as there is a natural limit to certain resources and technology can play a key role in expanding the productive base. Waas explained, "We need technology to cope with growth, because you cannot always extend new ports and the quay lengths are limited. It's also about more efficiency and better utilisation of the current asset base."

He then stressed, "It's important to keep up with all kinds of technological developments and determine if it adds business value. Ignoring it is the worst thing you can do."

He is a keen advocate of 'real time' business. This is where operations across companies are processed instantly and time delays between one phase of a process and the next are fizzled away to become almost non-existent into a seamless consumer experience without waste.

Waas said, "We have this idea that paper and signatures gives us control, but actually there are other means in technology to give you more control, a faster response and a better user experience. Ultimately, it is all about an efficient process and an excellent customer user experience."

Waas then explained how his industry has many traditional procedures to follow, which incur additional costs and process times. He believes these procedures can be improved through utilisation of current technology, which can often be performed in one click.

It makes sense that Waas is a strong advocate of the ideas of Blockchain and its inherent real-time operational capabilities where the transaction is never broken, eliminating for instance thirty-day or even sixty-day delay of payments.

He explained, "In the future, we will all be connected, and people will want to have visibility end-to-end, in every aspect, and both planning and transactions need to be real time."

One trend which he is convinced will take off is the enhanced ability to synchronise supply and demand, perhaps by utilisation of predictive analytics. Forecasting technology through simulation and mapping out future operational patterns is another disruptive technology he is convinced will take off. Another is the elimination of waste in the industry, such as empty return deliveries in trucks and other modes of transportation, again via better utilisation of technology.

Flexibility in making decisions, at a local level is how resources use can be optimised. He cited incidents all too common in logistics where trucks are waiting with space available but are unable to take on more cargo because of an unwieldy planning process. To remove such bottlenecks Waas advocates "more decentralised" decision-making where local decisions are fed into the wider operational process.

A strong advocate of the digitalisation of shipping, Waas explained, "What happens at the terminal yard operation is on a real-time basis, requiring a more flexible and faster decision-making process. We are currently moving towards real-time planning. Furthermore, planning and execution will be drawn closer together; that will give us the flexibility to act quicker on decisions."

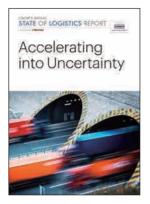
In the 28<sup>th</sup> State of Logistics Report, the main technology drivers were predicted to be big data, predictive analytics, artificial intelligence and robotics, and Waas can see all these developments impacting the industry over the ensuing years and playing a major role in furthering its success.

## KEY TECHNOLOGY TRENDS FROM THE STATE OF LOGISTICS REPORT

#### THE ANNUAL STATE OF LOGISTICS REPORT 2017

has a major focus this year on technology trends in the industry. Some of the key findings are highlighted here.

"Global transportation industry is in the early innings of secular change brought by new technologies and new players. Traditional business models are being challenged, but for now, incumbents believe they can invest or adapt to the change." Ravi Shanker, Lead Freight Transportation Analyst, Morgan Stanley.



- Changing consumer trends are shaping next generation supply chain trends
- Consumers expect immediacy, personalisation and convenience
- Algorithms matching carrier assets to shippers will encourage space sharing
- Connected digital supply chain allows manufacturers and retailers to better fulfil shipments
- Nevertheless, significant disruption of multiple modes of transport occurring by harnessing new technology
- Increased need for greater planning, qualification and service as greater quantities of cargo are transported over vast distances
- Effectiveness requires all links in supply chain to utilise digital technology, such as sensors and data storage
- Affordability of technology is improving
- To fully benefit from new technology partnerships across the supply chain should be encouraged

He cited Industry 4.0, which is the name for the current trend of automation and data exchange in manufacturing technologies, as a major driver of change. It includes the Internet of Things (IoT) and cloud computing.

He added, "The IoT will utilise more applied sensors and reading things from a distance; also using smart phones, along with smart sensors, to make machinery. The other thing is the cloud – getting ourselves together and connecting ourselves. And for robotics - on the one side we have the physical robots; and then there are the autonomous robots in machines to take on tasks from humans, a virtual labour force by agents."

He foresees a major transformation at terminals and changes in knowledge required and functions needed in organisations, with more suppliers delivering turnkey solutions reachable via the cloud.

He suggests artificial intelligence is already with us through communication via an App – asking questions and receiving instructions.

He said, "In five to ten years we will enter the autonomous era; we will have automatic cranes, vehicles, automatic shuttle carriers; so, the whole operation will be automated and the organisation transformed from operational towards a process organisation handling only the exceptions in the process."

The need for new technologies at ports is gathering pace. The German government is calling for applications to support its Funding Program for Innovative Port technologies. The Federal Ministry of Transport is keen to support projects that contribute to the development of innovative technologies in ports and the optimisation of cargo handling operations. During the first wave of applications in 2016, seventy five applications for twenty seven joint projects were submitted, as reported by World Maritime News.

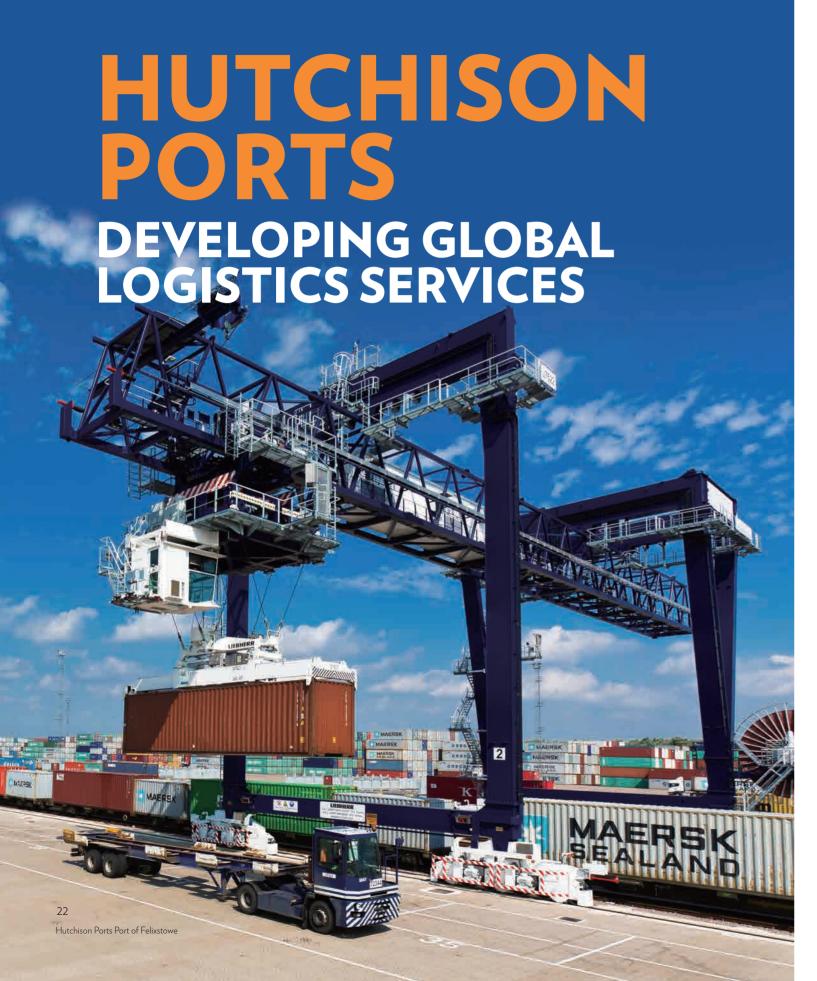
Waas believes elimination of waste resources is an urgent priority in the industry and this will allow more time to control or forecast and to add value. He said, "Most terminals handle millions of containers per year, if you do so you must apply the minimum resources to the maximum extent."

He believes port operators, like companies across many industry sectors, should regard themselves also as technology companies that offer seamless customer services. He explained, "These days technology is so far reaching that IT departments become a business partner for the business. A CEO at a major bank once said, we are not a bank but an IT company providing money services. In some respects, it is about changing your business model."

IT is often considered a cost or marginal investment, but according to Waas it will shape the future business going forward, the savings generated and extra productivity recoups this initial investment many times over. He advocates elimination and then automation because "if you automate processes that should not be there in the first place then it is a waste of money and time."

However, traditional workflows are now changing as new technology improves efficiency. Waas concedes this change process will undoubtedly present challenges in moving forward, but the opportunities are there to be gained for those businesses that embrace new technology.





As the ocean freight industry becomes increasingly commoditised, shippers and Beneficial Cargo Owners are looking for innovative ways to improve efficiency and add value in the supply chain. In response to this growing demand Hutchison Ports is developing its own logistics services throughout its global network.

"In each of our regions we have found unique opportunities to provide additional logistics services, for example in the Netherlands at Hutchison Ports ECT Rotterdam our European Gateway Services (EGS) business can offer tri-modal services incorporating road, rail and barge to reach inland terminals for efficient distribution throughout mainland Europe," said Mark Taylor, Director of Hutchison Logistics Europe.

"Hutchison Logistics is uniquely positioned to help shippers around the world make better informed decisions and add value to their cargo, including arranging for containers to be unpacked and products stored and cross-docked in warehouses close to our ports and final delivery arranged."

"We provide a neutral end-to-end service from origin to destination and we work with shipping lines, trucking companies, warehouse operators and inland logistics centres to expedite cargo."

Hutchison Logistics is also investing in its own asset base which includes an 80,000 sq. ft. bonded warehouse in Felixstowe in the UK which will provide container deconsolidation services.

With further expansion planned of 1.4m sq. ft. of space at the new Logistics Park development at the Port of Felixstowe, the warehousing is being developed to cater for shippers wanting to deliver directly to their final customers or via national and regional distribution centres for final delivery.

There is also growing demand for palletisation of cargo at the port which means that cargo can be processed for onward transportation using standard trailers. The benefit is that the cargo is palletised when it lands at the port, saving the cost and time of an additional container move to a third party for devanning and processing and restitution of the empty container. Similarly, the reverse works well for export cargo which can benefit from consolidation at port.

"For outsize or project cargo that does not fit on a standard trailer we can prepare the shipment at the port, working with project forwarding companies to arrange special trailers for onward road, rail and barge transportation depending on the location. We have special loaders and equipment at the terminal to handle these shipments."

Hutchison Logistics flexible cargo services also means that shippers have alternatives to mitigate for unforeseen disruptions in the supply chain, such as vessel delays, labour disputes affecting ferry operations, truck driver shortages as well as seasonal road traffic congestion.

"Increasing congestion on roads in Europe and the UK has led to an increase in short sea operations, which are both cost effective and environmentally a better option to trucking. More cargo is arriving by sea from our sister port in Gdynia in Poland for example, as shippers look to smarter supply chain options."

"Many shippers are also looking for alternative routes to and from the UK as there is uncertainty regarding Customs arrangements post-Brexit."

One of the potential choke points could be for trucks at English Channel ports and ferry crossings as additional Customs procedures and checks may be implemented once the UK leaves the European Union.



European Gateway Services offered by Hutchison Ports ECT Rotterdam

The services provided by Hutchison Logistics vary from port-to-port around the world depending on demands of customers and are there to help advance global supply chains.

"We are part of the shipping and logistics communities within our network of ports we operate in and have the local expertise, network and relationships to provide customised services and solutions to support our customers and deliver benefit to all concerned," said Taylor.

Providing a diversified product offering, including logistics facilities, is a natural progression, according to Andy Tsoi, Managing Director - Middle East and Africa (MEA) of Hutchison Ports: it promotes customer loyalty and allows Hutchison Ports to diversify its income base.

He said, "I think the key for us is still customer loyalties, creating stickiness with our customer, meaning we are going to go one step further than just handling the boxes."

The most mature project in the MEA region is a government initiative in Oman to establish a logistics park close to Muscat. Hutchison Ports has been working closely with the local authorities for over a year on this huge logistics project.

His colleague, Eric Ng, Business Director - MEA of Hutchison Ports added, "We are considering each of our business units to see if there is such kind of inefficiency in the market. We will act as a facilitator, for example in Karachi, to improve connectivity to the country's hinterland. We are planning for a rail terminal in our new terminal in Karachi, hopefully by the end of next year we can start the service on a small scale and grow the business gradually."

In the MEA, Tsoi concedes that there is much catching up to do to mirror what Felixstowe has achieved over the last fifty years. However, he says that in the Middle East they are trying to create a business model where ports can grow faster and be more competitive in terms of product offering. At their facilities in the United Arab Emirates, he described the variety of specialist warehouse facilities, including: temperature-controlled warehouses, or facilities where the taxes are paid on import duty when the cargo is distributed. It is not only about trying to create an integrated service for the customers across the region, but recognising where they cannot be price competitive.



Hutchison Ports Ajman

There is a push to see how they can add value from the cargo landing in the port to reaching the shelf in supermarkets. Tsoi said, "We just have to be cautious where we invest, where we can create value."

However, in the Middle East the growth of internet shopping as a major trend and the demand levels are high. This demand Tsoi wants to tap, adding, "There's thirty-three million population in Saudi Arabia. so the connection between the customers and the warehousing facility and the ports is something that will require a lot of warehousing logistic connections. We will require local partners."

Logistics development is a long-term project. Tsoi said, "If the cost does not justify the means now it will justify in five or ten years' time."

For Vincent Yuen, Managing Director of Hutchison Logistics (HK), there are many ways to build relationships with shippers and consignees.

He said, "We are offering intermodal services for shippers and consignees, which include trucking, feedering and even rail services in various areas. It depends on the location and what we can offer; we are even doing custom clearance for some of our customers in Myanmar."

He added, "Aside from the intermodal or near port solution which we offer locally in each port – we are also looking for solutions which we can offer as a total chain instead of customers having to contact freight forwarders, truckers, carriers, or custom brokers, we can link up these services together with the terminal to offer a full total logistics solution."

Yuen added, "In this region, we are more focusing on intra-Asia solutions and imports into China.

Within Asia, the company is exploring many ways where our terminals can add value towards the supply chain. The company is offering a total logistics solution in Myanmar for cargoes moving in and out of the country. With our self-owned trucking fleet and our strong custom clearance partner, we provide a one-stop service for customers looking for logistics services to and from Myanmar.

The global presence and financial wherewithal of Hutchison Ports allows the company to link the distribution chain from source to destination, such as, for an international trader reselling copper from Amsterdam to a manufacturer in China.

Yuen explained, "We cut, packed, and stored the cable in the container, and then shipped those containers back to China. With us handling all the cutting and transportation of these cables, we can provide weighing and value-added services in our ports. This also facilitates the trade by justifying the amount of cable under such trade"

He cited another example for import cargo coming to Hong Kong, where Hutchison Logistics is providing a door-to-warehouse service.

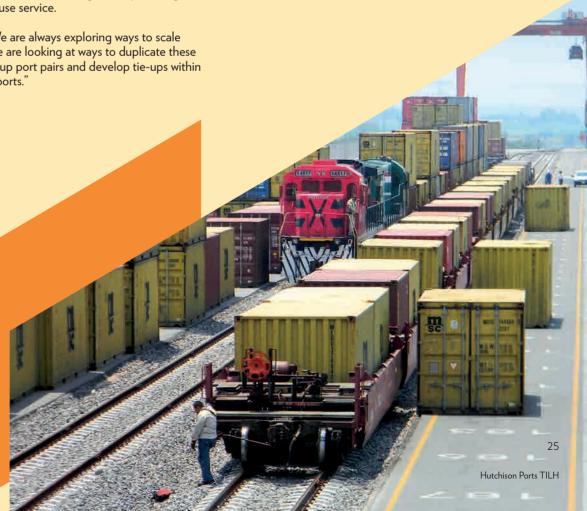
Yuen added, "We are always exploring ways to scale our solutions; we are looking at ways to duplicate these solutions to link up port pairs and develop tie-ups within our network of ports."

Hutchison Logistics in Mexico has developed extended gate services at the ports located at Lázaro Cárdenas, Veracruz and Hidalgo, according to Saul Cucurachi Bello, General Manager at Hutchison Logistics Mexico.

"We have moved beyond traditional terminal services and we are focused on what is inside our customers' containers and we know who the final consumer is. We are able to offer value-added logistics solutions including warehousing, pick and pack, labelling, kitting, end-user distribution, cargo security and inland transportation tracking," said Bello.

In Mexico, Hutchison Logistics also offers ocean and air freight forwarding services, trucking and door-to-door

"We offer intermodal operations (rail-truck-rail) connecting our customers to inland destinations through our port-to-door services in Mexico and into the US and Central America. We are also helping customers navigate through complex customs clearance working with our network of custom brokers." he added.



## IMPLEMENTATION OF REMOTE-CONTROL OPERATIONS IN FULL SWING AT HUTCHISON PORTS

s the giant container vessels of 18,000-20,000+ TEU capacity are calling at the world's major ports, terminal operators are gearing up to accommodate these 'Goliaths' of the sea.

The increased size of these vessels has led to many challenges at ports, including unloading a large quantity of boxes from ship-to-shore and from shore-to-container yard over a very short timescale, while improving productivity and maintaining a primary focus on safety and health.

The velocity of the crane moves and the height of the new and retrofitted quay cranes mean that technology is playing an increasingly important role on the waterfront. It provides an essential aid to moving containers more efficiently and safely around the terminal.

"As early as 2013 we decided to deploy remote control-semi-automated gantry quay cranes to operate in Saudi Arabia. There were several reasons we selected this port; one of the main reasons was that our crane operators had to work in extremely hot weather, frequently over forty degrees centigrade. By moving the operators indoors, they were in a safer, air-conditioned environment and very quickly we saw productivity improve," said Eddie Lee, Group Engineering Director at Hutchison Ports.

## TRUE PARTNERSHIP WITH ZPMC

The catalyst behind the initiation is a unique and pioneering partnership between Hutchison Ports and global crane manufacturer Shanghai Zhenhua Heavy Industry Co., Ltd. (ZPMC). In the summer of 2013, ZPMC was contracted to build three conventional gantry quay cranes for Hutchison Ports Dammam at Saudi Arabia.



"We approached ZPMC to upgrade these three conventional gantry quay cranes into remote control and semi-automation. They first hesitated but since we had developed a good relationship with them over the years they were willing to assign a team to work purposely for this project," said Eddie Lee.

"We invited them to understand every aspect of our terminal operations and processes so that they could take this information and knowledge and then implement into the core design process, which includes risk assessment to quay cranes and the yard gantry cranes." said Lee. Ms. Yang Yuqing, Electrical Group Executive General Manager at ZPMC, said, "When Hutchison Ports approached us to collaborate on the project we had no container yard operations experience at all. However, we embraced the opportunity to have a more in-depth understanding of our customers' business and began the project."

"We worked closely with Hutchison Ports. It was a true collaboration between their operations development team and our engineers. After in-depth analysis of our client's terminal operation mode we were able to move forward to design and build cranes to their exact specifications and requests. Given that remote control and automation at the time was relatively new to the container terminal industry we proposed to Mr. Lee to incorporate those functions into only one quay crane first as a trial," added Ms. Yang.

However, Hutchison Ports had full confidence in ZPMC's team and requested them to build the remote control/automation features in all three units instead of one.

"We trusted ZPMC and they took the time to understand what we wanted and how we operate. In the end they successfully designed, built, delivered and installed three remote control-semi-automated quay cranes in Dammam, Saudi Arabia by early 2015," said Lee.

## THE TECHNOLOGY EVOLUTION GATHERS PACE

On conventional quay cranes the crane operator sits in a cabin typically forty to fifty metres above the deck of the ship. His visibility is limited especially in poor weather when the container is inside the hull. With the latest camera technology available, it means that the remote-control operators can now zoom in on the spreader and container from a desktop monitor, which enables more efficient moves with precision accuracy.

Furthermore, those semi-automated functions such as anti-skew/anti-sway and profile scanning gave the crane operator at the remote-control desk a better control of the container movement.

"Initially we saw comparable productivity and performance between manually operated cranes and remote-control cranes. As the remote-control operators become more proficient and got used to the new system, productivity increased and performance improved. After the successful delivery, trials, and operations of the remote-control quay cranes at Dammam, Hutchison Ports now has a total of eighteen semi-automated units in use at its ports with five units in Saudi Arabia, four units in Oman, eight units in Pakistan and one in Rotterdam." said Lee.

By the end of 2018 Hutchison Ports plans to add another eighteen remote control cranes at its terminals around the world.

#### **CURRENT OPERATIONAL REMOTE-CONTROL QUAY CRANES**



#### **HUMAN FACTOR**

Despite increased deployment of technology on the waterfront, the human element is still critical in today's modern container terminal. Hutchison Ports has introduced remote control quay cranes at facilities around the world, which leads to a better indoor working environment and improves the safety and health of the operator while harnessing the support of technology.

"Many of our crane operators have been retrained to work in a remote office location at the terminal where they operate the semi-automated cranes from a desktop. The chair and desk are ergonomically designed and the office is air conditioned providing a safer and healthier environment for our operators," said Eddie Lee.

"We need the operators particularly for the onboard locking and unlocking of containers as the system cannot yet adapt quickly enough to the movement of the ship at quayside. There are small margins involved as the angle of the ship changes depending on the swell of the sea, strength and direction of the wind. The operators have the experience and the skills to manoeuvre the spreader for the last few centimetres and lock onto the corner castings," he added.

Operators working on traditional manually operated cranes, are required to travel across the container yard to and from his or her crane to the operating cabin and this takes time. The operators also need to leave the cabin for meals and body breaks. The office-based



Hutchison Ports Dammam

environment means there is less travel time to and from the crane operator's work space which increases productivity and efficiency.

The majority of crane operators in most countries are men, but as the port industry migrates to remote control operations there will be more opportunities for staff who may find the new working environment appealing.

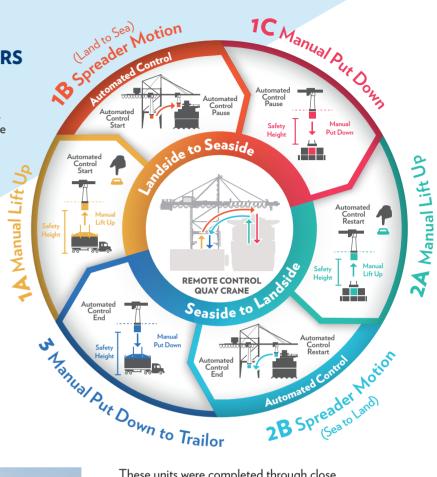
By providing an office-based environment for remote control crane operators it enhances equal opportunity of employment, such as female operators and handicapped workers. It might also attract a new pool of workers through introduction of flexible working hours

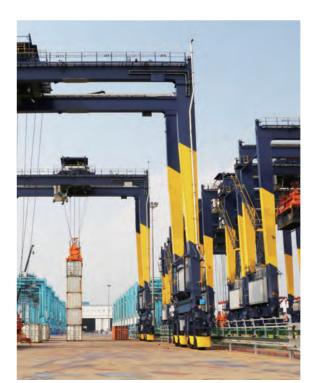
"Ultimately we see this as a positive development for our crane operators and the industry as we are enhancing the working environment and will enjoy higher productivity rates." said Lee.



While the focus has been on the development of quay crane technology, there has also been a parallel programme being developed for Rubber-Tyred Gantry Cranes (RTGCs) so that they can also be controlled remotely. The major challenge is the variable tyre pressure on position determination and the transmission of signal and data to the remote-control desk.

Following four years of research and engineering development at a pilot project at Hongkong International Terminals, Hutchison Ports contracted with ZPMC to build their first fleet of ten remote-control RTGCs for Hutchison Ports Thailand at Laem Chabang.





These units were completed through close collaboration between Hutchison Ports and ZPMC. Both companies worked on the design and development which resulted in a very successful and positive outcome for both parties. At the moment, the design development of these machines are undergoing pre-shipment testing and commissioning at ZPMC. When they are installed at Hutchison Ports Thailand they can move containers from truck to stack remotely and carry out house-keeping reshuffling automatically.

"It is important to note that most port operators are introducing remote control and automated crane technology to their terminals. We are moving towards that direction in order to maintain our competitive advantage but only those terminals who can demonstrate a sound financial return from this technology will be included in our automation programme." concluded Lee.

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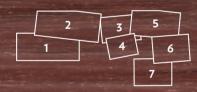


Remote control RTGC for Hutchison Ports Thailand





# ANNIVERSARY **CELEBRATIONS AT HUTCHISON PORTS**



#### 1 Hutchison Ports Alexandria 10<sup>th</sup> Anniversary celebration

The terminal celebrated its 10<sup>th</sup> Anniversary in a reception attended by all staff. This wonderful event took place on 25<sup>th</sup> May in the splendid setting of the garden of the Hilton King Ranch, Alexandria. Darius Teo, CEO of Hutchison Ports Alexandria, honoured those company employees who had contributed 10 years' service to the company.

#### 2 Graffiti in Hong Kong to promote community harmony

Graffiti artists, volunteers from Hutchison Ports HIT. COSCO-HIT Terminals and Asia Container Terminals (ACT) and the elderly transformed ten containers into dazzling works of art at Kwai Tsing Container Terminal 8 (East) as part of celebrations to mark the 20th Anniversary of the establishment of the Hong Kong Special Administrative Region (HKSAR) and to promote community cohesion. This activity, with the theme 'Community Graffiti Day @ the Terminals' was co-organised by HIT, COSCO-HIT and ACT.

Gerry Yim, Managing Director at Hutchison Ports HIT, delivered a speech extolling the virtues of diversity and inclusion, the prime aims of the event, and congratulated all the participants for their imaginative artwork to celebrate the establishment of the HKSAR 20<sup>th</sup> Anniversary.

### 20<sup>th</sup> Anniversary

The beautiful backdrop of the Valley of Guadalupe vineyard was the setting for the 20th Anniversary celebrations of Hutchison Ports EIT with the theme '20 Years Connecting Ports'. EIT invited quests comprising company clients, employees, shipping lines, agencies, business partners and industry authorities.

Javier Rodriguez, General Manager at Hutchison Ports EIT. initiated proceedings with an introductory speech, and then announced a further 20-year concession for the operation of the port with the integral Port Administration. Jorge Lecona, Managing Director of Hutchison Ports Latin America and the Caribbean and other local government officials also delivered speeches to congratulate EIT's 20th Anniversary.

#### 4 Hutchison Ports PPC with employees who possess 20 years' service

HUTCHISONPORT PPC

A lunch event was held to celebrate Hutchison Ports PPC's 20<sup>th</sup> Anniversary at the Hilton Hotel Panama. This event was attended by fifty three employees, from Balboa and Cristobal ports, who had given 20 years' dedicated service to the company and a 20 years long service plaque was presented to these employees as a token of appreciation from the company.

#### 5 Xiamen International Container Terminals celebrates 20<sup>th</sup> Anniversary with CSR activities

Terminals (XICT) celebrated its 20<sup>th</sup> Anniversary this year. Various community-based activities were held to mark this two-decade milestone. In March, XICT staff and management visited Kulangsu Elderly Centre, putting on performances to entertain the senior residents and handed out gifts. The following month, staff visited Shuiyang Primary School to donate books and school supplies to the students. Later that month, over one hundred staff took part in a five-kilometre walkathon along the picturesque Haicang Road to wrap up their celebration activities.

#### 6 Shantou International Container Terminals (SICT) 20<sup>th</sup> Anniversary Celebration

PORT OF FELIXSTOWE

On 8 December 2017, Shantou International Container Terminals (SICT) celebrated its 20<sup>th</sup> Anniversary with over 180 guests including SICT board of directors, executives from shipping lines/ cargo agents and SICT management staff attended the celebration banquet. Eric Ip, Group Managing Director of Hutchison Ports and Keith Lau, General Manager of SICT, both in their speeches, expressed their gratitude to all business partners and stakeholders for their support during these years.

#### 7 Hutchison Ports Port of Felixstowe marks its 50<sup>th</sup> Anniversary at the Cutty Sark

Hutchison Ports Port of Felixstowe held a celebratory dinner in London on board the historical tea-clipper, the Cutty Sark, to mark 50 years of dedicated container terminal operations at the Port. Hutchison Ports EXCO and other distinguished guests attended, including: His Excellency Liu Xiaoming, Chinese Ambassador to the UK; Kitack Lim, Secretary General of the IMO: Therese Coffey, UK Government Minister; customers and stakeholders also participated in the celebration. A spectacular firework display over the River Thames rounded off a wonderful evening.

## 3 Hutchison Ports EIT celebrates

Xiamen International Container

# IT'S COOL TO BE'GREEN'

G o Green is part of a global environmental initiative undertaken by employees of the international ports and maritime community.

Under this annual set of activities, employees of six port operating groups, including Hutchison Ports, collectively demonstrated their support for environmental protection in four locations where they share in local port operation. The latest round of activities took place in the second half of September 2017 under the theme of Climate Change.

Over one hundred staff members of Hutchison Ports BACTSSA, PSA and DP World joined a 'Green Race' in benefit of Forest Bank, a conservation NGO. The next day, sixty two people from the three terminals revitalised a local orchard, planting sixty five fruit trees that are used for educational purposes, with a potential  $CO_2$  offset value of 1,495 tonnes of  $CO_2$  equivalent ( $CO_2e$ ).

Employees of Hutchison Ports Thailand, DP World and PSA worked alongside a Royal Thai Navy conservation team to restore a mangrove forest on the site of a former shrimp farm and collect trash from the vicinity. Mangroves are rich in ecological value, protect coastlines against erosion, and store vast quantities of CO<sub>2</sub>. The two hundred planted trees will one day store up to 4,200 tonnes of CO<sub>2</sub>e.

A team from Hutchison Ports ECT joined with the Port of Rotterdam and DP World staff members to plant Duindoorn bushes in a nearby sand dune conservation area. When it comes to climate change resilience, sand dunes play a natural role in coastal protection. They also host birds and other wildlife.

In Shanghai, an athletic group of employees from Shanghai Mingdong Container Terminals (SMCT) and Shanghai International Port Group undertook a three-kilometre race along the Huangpu River. For each racer, SMCT donated five trees' worth of money to Roots & Shoots, a conservation charity set up by Jane Goodall. The organisation will use the funds to plant five hundred desertification-fighting trees in China's Ningxia region, with a CO<sub>2</sub>e storage value of up to 950 tonnes.





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# BE THERE WITH HUTCHISON PORTS.



With more than 50 years of port operating experience and 35 ports along the Belt & Road, we're there for your business.

