

# Sphere

#43 2017 

INTERNATIONAL JOURNAL OF THE  
CK HUTCHISON GROUP



## MAN MACHINE: CYBORG RETAIL

The Cradle of Civilisations **09**

50 Years of Boxing **16**

Happy Anniversary Hong Kong **15**

To Do and To Be **18**



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Sphere Magazine #43  
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Cover Illustration  
Jessica Li

Sometimes invisible, sometimes in your face, new technology in retail is changing this venerable business. Our artist captures the online and offline future, but uses warm colours to remind us that shopping is still a very human experience.

**Our connection to the places we live and work ...  
is something we rightly treasure.**

W E L C O M E

# A FUTURE WORTH CELEBRATING

For millennia the Middle East has been the place where East meets West. Going to the region's bazaars, you can feel the immense richness of the history in those markets. The Group is expanding its long-standing presence in the area and that growth, from ports to water technology, can be discovered in these pages.

Those bazaars, while they may now accept cashless payments, still embody the essence of ancient practices. Shoppers want to see and feel the goods. Ancient merchants connected with far-away customers just as their modern descendants do now, although today it is perhaps through email and apps instead of by galleon. Like the modern merchants, A S Watson Group also understands the innate retail impulse that has ruled commerce for thousands of years, while the retail group is at the same time developing and deploying world-class technology - from radio-frequency identification (RFID) and deep learning to virtual reality (VR) and augmented reality (AR).

The Port of Felixstowe also celebrates the adoption of new technology that changed the world. The introduction of containers 50 years ago revolutionised logistics and put the Port at the centre of Britain's economy, an event worth celebrating.

Celebration has been very much a part of the Group's experience lately, with Mr Li celebrating the annual awards ceremony for Shantou University graduates, this year with Nobel laureate Mo Yan.

Our connection to the places we live and work - from Felixstowe to Hong Kong, in ports and stores, from now and into the future - is something we rightly treasure and will value for decades to come. ■

 CK HUTCHISON HOLDINGS LIMITED

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**Infrastructure**  
**Energy**

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## CELEBRATIONS

### Let's party! Let's celebrate!

The Group celebrates the Handover vicennial: 20 years since Hong Kong returned to China!

# 20

## COVER STORY

# MAN + MACHINE = ULTIMATE SHOPPING EXPERIENCE!

**A S Watson is researching and deploying cutting-edge tech from AI to AR. But it hasn't forgotten the most important factor in growing in a competitive marketplace.**



REGIONAL FEATURE

**The Middle East and East Africa:  
A legacy of civilisation**

Trade and innovation drive technology and civilise humanity. CK Hutchison's businesses in the Middle East and East Africa reflect this important fact.



PORTS FOCUS

**Thinking inside the box**

"The Box" - a standard container for shipping - has transformed global trade and the Port of Felixstowe. On 1 July 1967, the container revolution came to Britain.



PHILANTHROPY FOCUS

**Eyes wide open into the future**

Mr Li speaks to the graduates of Shantou University, warning against a "wilful blindness" of the soul.





## CORPORATE

### EYE ON THE FUTURE

Over 300 Hong Kong students benefited from the experience of CK Hutchison staff at the CKHH Volunteer Career Fun Day. Volunteers conducted mock interviews, led games and manned exhibition booths to help young people gain insights into their possible future in the working world.

### BASRA BOUND

Hutchison Ports is bound for Basra, the economic gateway to Iraq. It will provide world-class services for containerised, refrigerated, general and project cargoes under the banner of Hutchison Ports Basra.

### SOHAR, SO GOOD

Big news as Hutchison Ports Sohar launched its Auto Gate System with fanfare and in the presence of His Excellency Dr Ahmed Mohammed Salem Al-Futaisi, Minister of Transport and Communications, Oman.



## PORTS

### Yantian grows with the world

Hutchison Ports Yantian recently added its new Berth 16 – a whopping 886 metres in length with a water depth of 17.6 metres – with eight cranes, four of which can handle 150,000-ton ultra-large container vessels.

It also welcomed the world's biggest-ever container ship on its maiden call on 28 May. The *OOCL Hong Kong* can carry 21,413 TEUs and is 400 metres long and 60 metres wide. After Shenzhen, it was off to visit the port group's Port of Felixstowe and ECT Euromax within a month.

### UBI SO HAPPY TO DOWNLOAD THIS APP

Hutchison Ports Thailand is the proving ground for a new mobile app, Ubi (pronounced you-bee), built on and integrated with the nGen system. A wide range of operational functions and intelligence-providing features include information on containers and vessels as well as Truck Appointments and VGM (Verified Gross Mass) declarations.



### PAKISTAN PRODUCTIVITY PURRING ALONG

Hutchison Ports Pakistan recently set a new productivity record, moving 1,953 containers in just 11 hours. The Vessel Operating Rate of 181.15 container moves per hour was a dramatic improvement from the previous record of 140.18 container moves per hour at Pakistan's first deep-water container terminal.

### INLAND CONNECTOR FOR YANTIAN

Hutchison Ports Yantian has launched an inland container depot at Changping in Southern China. The new facility will optimise Yantian as a logistics gateway for the region.



**LOOK GOOD AND FEEL GREAT**

The Institute of Textiles and Clothing of the Hong Kong Polytechnic University supplied their best and brightest to design vibrant new outfits to make Watsons' staff look good and their customers feel great!



**RETAIL**

**Smiles around the world**

It's back! A S Watson Group's (ASW's) Global Smile Campaign, the world's favourite toothy campaign, will see 13,500 outlets hold over 300 events, bringing joy to people in 24 markets in Asia and Europe.



**YES, I CAN!**

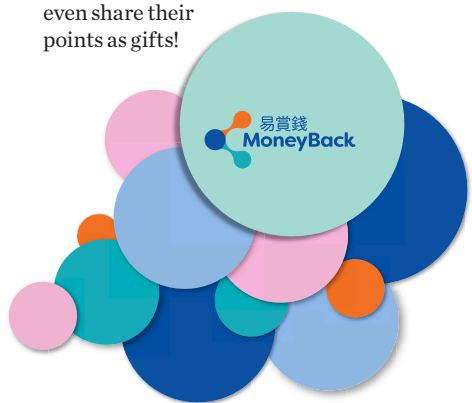
ASW's perennial contribution to sports in Hong Kong, the Hong Kong Students Sports Award, held for the 12th year in a row, rewarded 898 elite student athletes. It encourages young people, from over 85 per cent of Hong Kong schools, to strive for achievement through the discipline and commitment demanded by elite sportsmanship.

**ECOMMERCE CHAMPS!**

eLab drives much of ASW's e-commerce across the retail group and also wins prizes around the world. PARKnSHOP Hong Kong won the Best App (Consumer Brand) and Best E-Commerce App awards at the Mob-Ex Awards 2017, plus three *Marketing* magazine eCommAs Awards, including Gold in Best E-Commerce App and Silver in both Best E-Commerce Design/Re-design and Best E-Commerce Merchant (Consumer Goods).

**KEEPING BY GIVING AWAY**

Ten years, 600 outlets, and HKD800 million worth of benefits returned to 3.6 million members. And now, MoneyBack in Hong Kong has transformed into a mobile app that allows customers to monitor and even share their points as gifts!



**MoneyBack: 10 years, 600 outlets, and HKD800 million worth of benefits returned to 3.6 million customers.**



Watsons Hong Kong app won prizes at the *Marketing* magazine eCommAs Awards including three Bronze awards in Best E-Commerce Website, Best E-Commerce Design/Re-design and Best E-Commerce Merchant (Health and Beauty).



## TELECOMS

### 3 + 2 = 4 million

In July, **3** Austria announced it will acquire fixed-line player Tele2 Austria to amass an account base of four million mobile, fixed-line and Internet units. This combination will create a powerhouse telecoms provider able to offer hybrid communications solutions across Austria.



### MASSIVE MIMO TECH GETS TEST RUN AT ROSKILDE

**3** Denmark recently tested new 5G technologies in advance of a nationwide deployment. Massive MIMO (multiple-input and multiple-output) towers were set up at Denmark's premiere music festival – Roskilde – where up to 40,000 customers were on hand to test the system, the first-ever commercial scale test in Europe.

### YOUNGOV SAY YOUWIN

**3** UK was recently ranked the No 1 mobile network operator by YouGov, after being judged to be the best mobile Internet provider for smartphones in 8 out of 12 categories.



### GAMING TO WIN

**3** Hong Kong has partnered with world gaming leader Razer to open their first joint store selling Razer's equipment plus mobile devices and telecom packages which **3** has specially designed for hardcore gamers.

### 3 UK was ranked the best mobile Internet provider for smartphones in 8 of 12 categories by YouGov.



### 3 UK BRINGS THE STARS THROUGH STELLAR BROADBAND

**3** UK is upping its game by buying more capacity through its purchase of UK Broadband, a fixed wireless broadband service. Customers will need the additional bandwidth for new special packages like Go Binge, which allows unlimited use of video-streaming services like Netflix without impacting their regular data plans.



### CREA-TRI-VE IMPULSES

**3** Indonesia is supporting creativity across Indonesia. Its Sound of Tri contest is sponsoring indie music competitions in 13 cities. Winning songs and bands, from across genres, will be professionally remastered and shared across the nation.

Much of that sharing will happen through Bima+, a curated digital hub allowing millions of **3** Indonesia customers to create and share their artistic and entrepreneurial ventures. Over 80,000 people use the app daily and it has been downloaded into one million phones.







**INFRASTRUCTURE**

**CALMING CONTROL**

HK Electric has entered into a new 15-year Scheme of Control Agreement, in effect until December 2033. The agreement provides the certainty needed to support the Hong Kong government’s energy and environmental policy objectives, including its Climate Action Plan 2030+.

**WINNERS DIG DEEP**

UK Power Networks was named Britain’s Utility of the Year for the second year in a row at the prestigious Utility Week Awards, the first company ever to repeat a winning spot. That award became a double when it also won the same title at the National Skills Academy’s People in Power Awards, and clinched a Gold Award from Investors in People for the way it invests in and treats its employees.

Now the company is drilling under the River Orwell to install new underground cabling to help supply Suffolk and north Essex. Digging new tunnels will beautify the area by reducing overhead lines, and boost power to communities including Felixstowe, Shotley and Harwich.

**GETTING WET: A HUGE WAVE COMING!**

A merger between NWG Business (NWGB) and Anglian Water Business (AWB) will result in a company called “Wave”, serving over 300,000 business customers. NWGB is expert at industrial waste management while AWB is a water efficiency pro. Working together, this big wave will serve 19 per cent of all customers in the UK!



**TELECOMS**

**HTHKH focuses on mobile future**

Hutchison Telecom Hong Kong Holdings (HTHKH) has sold its fixed-line business in Hong Kong and will invest part of the proceeds in the development of new mobile phone services to prepare for the coming 5G era. A 99.95 per cent vote in favour of the disposal by shareholders, in the opinion of Canning Fok, HTHKH Chairman, “crystallises value for the company and its shareholders”.



**ETHICAL WATER**

Northumbrian Water Group (NWG) was the only company named in the Water and Sewerage Utility category in the Ethisphere Institute’s World’s Most Ethical Company list. It was also one of only four from the UK in any category. The award goes to the companies that “recognise their role in society to influence and drive positive change, consider the impact of their actions on their employees, customers and community, and use their values and culture ... to underpin the decisions they make every day.”

**SAVING THE COUNTRYSIDE**

Helping minimise waste from New Zealand’s farming communities, EnviroNZ’s recommissioning of a new plastics extrusion plant will see 800,000 plastic fertiliser bags a year kept out of landfill. Instead, they will be recycled into plastic pellets to be used in local manufacturing.

**COMPLETING THE COVERAGE**

HK Electric is expanding its coverage of multistandard quick EV (electric vehicle) charging stations so that drivers will never be more than 15 minutes away from a rejuvenating zap for their wheels.

**THE FUTURE OF GAS**

Australian Gas Infrastructure Group has partnered with AquaHydrex to develop a system to create hydrogen from water for injecting into their gas network. This novel electrolyser technology will store renewable energy in the gas grid to decarbonise Australia’s gas supply and support the nation’s aspirations of a near zero-carbon energy sector by 2050.



**OTHERS**

**WATER AND ELECTRICITY**

Star Pumped Storage Ltd, a Hutchison Water member company, has received financing approval from the Israel Electricity Authority to develop a 344MW pumped storage power plant that will pump water up to a reservoir when energy demand is low, and let it flow down through turbines to produce electricity when demand is high.



**GAMECO'S GOT GAME**

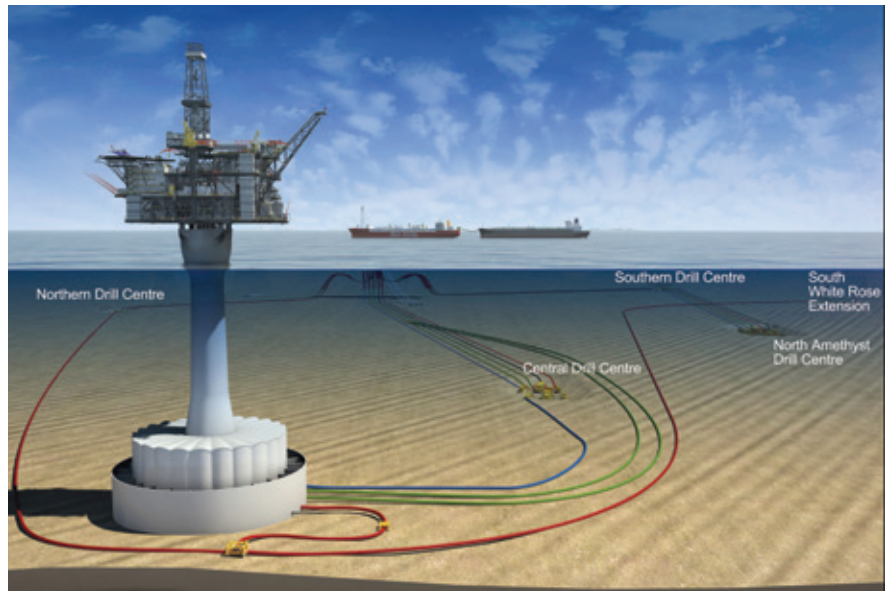
In June, Guangzhou Aircraft Maintenance Engineering Co (GAMECO) completed China's first A380 six-year check, including heavy maintenance and repainting. At the peak, over 140 engineers were on the aircraft during this full refurbishment of 18 galleys, 14 lavatories, 506 seats and thousands of accessories. Over 4,000 square metres of the aircraft were painted using new technology in this step up in GAMECO's development.



**ENERGY**

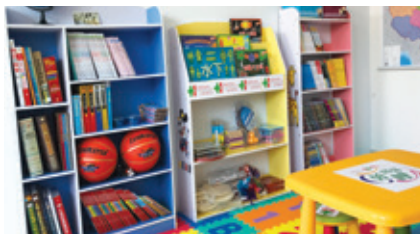
## West White Rose to Blossom

The West White Rose Project, the largest sanctioned in Canada this year, will produce up to 75,000 barrels of oil per day by 2025. Drilling infrastructure will sit on the ocean bed and connect to the SeaRose FPSO, a floating vessel that processes and stores offshore oil. Building will commence in early 2018.



**READ, LEAD, LOVE**

Shanghai Hutchison Pharmaceuticals Limited (SHPL) was selected by industry leaders as one of China's top 100 pharmaceutical manufacturing enterprises. It also leads a programme to help medical professionals develop the medical community and build harmonious doctor-patient relations. In addition, the company's volunteers visited or refurbished nearly 20 SHPL libraries in the Mainland to help support China's youth.



**SUPERIOR GROWTH ACROSS BORDERS**

Husky Energy is expecting "Superior" performance from its newly acquired refinery in Wisconsin, USA. The Superior Refinery will expand Husky's total downstream capacity to approximately 395,000 barrels a day, helping to capture full value from production in Western Canada.

**150 REASONS TO LOVE THEIR COUNTRY**

Husky Energy's employees celebrated Canada's sesquicentennial anniversary by donating to local charities, volunteering to prepare meals for the less fortunate, and by cleaning debris from Confederation Park, named after the act that gave rise to a new nation 150 years ago.

## INNOVATION

## The Middle East and East Africa

A LEGACY OF  
CIVILISATION

The twin forces of trade and innovation have driven the founding of many of humanity's greatest civilisations. The Middle East and East Africa bore witness to those empires and are now a vital part of CK Hutchison's success.

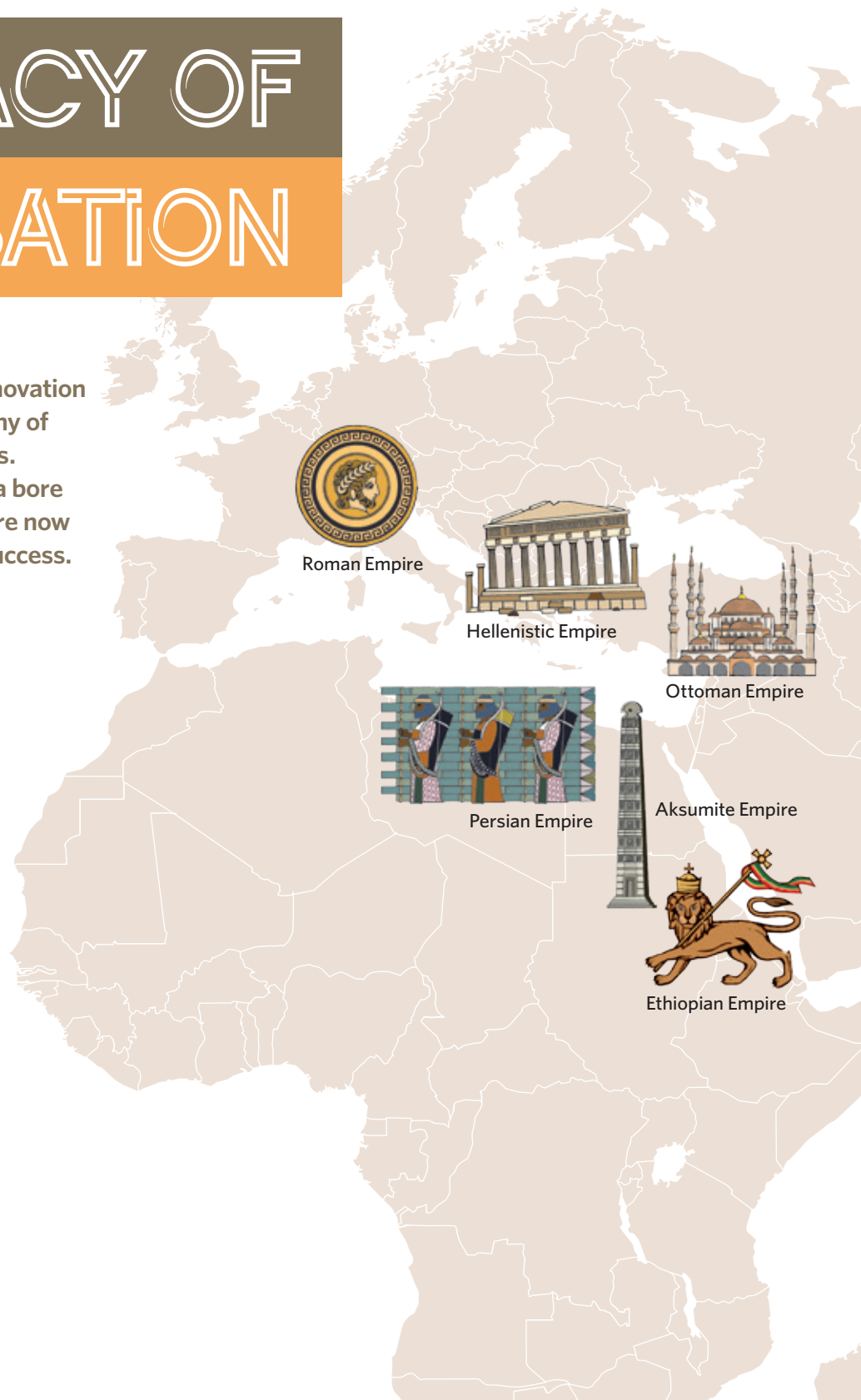
**T**he Middle East and East Africa have a long history of being at the crossroads of seaborne trade, driving innovation and learning that led to the birth of great empires. Actually, grander than empires: civilisations.

Today, CK Hutchison's efforts in the region support millennia-old trade routes and drive technological change that will help secure its future.

#### THE MIDDLE EAST? MIDDLE OF THE WORLD!

From the mountainous Caucasus to the fertile Nile Valley, the Middle East was for millennia known as the civilised world. It was the centre of the world, with barbarism at its fringes. The Hellenistic, Persian, Roman, and Ottoman empires were all blessed with – at times – diversity, tolerance, military strength and vibrant trade.

For thousands of years, the Middle East connected the known worlds, Western empires and their Eastern counterparts. Those empires may have risen and fallen, but intermediaries from the Middle East



**“The Belt and Road Initiative is like a wheel ... you can see that it is rolling out ... running faster and faster.”**

Eric Ip  
Group Managing Director  
Hutchison Ports

were always there to bring the likes of silks, spices, glassware and ceramics to lords’ and princes’ tables, generating enormous wealth for cities such as Damascus, Baghdad and Samarkand during the medieval period.

As the poles on which civilisations turned multiplied and spread around the world, the region became known as “the Middle East” and drew its power in knowledge, mythology, technology and culture from being the facilitator of East-West exchanges; a wellspring of inventions and discoveries.



4000BC~

Blessed by the fertile soil between the Euphrates and the Tigris, the Mesopotamian civilisations see the rise of ancient cities in the region.

200BC-  
200AD

The Ancient Silk Road shapes East-West exchange during the Chinese Han dynasty.

600-  
1250

The Islamic Golden Age sees numerous technological advancements and fosters East-West trade along the Ancient Silk Road.

1400-  
1700

Disintegration of the Ancient Silk Road gradually pushes trade onto the high seas and brings about the Age of Discovery. Zheng He presents a giraffe to the Chinese imperial court in 1414 after returning from one of his far-ranging voyages.

**ANCIENT LINKS, UNBROKEN**

From Dakar to Qatar, it brought together the three major cultural zones – Europe, the Far East and Sub-Saharan Africa. Trade routes, both by land and sea, were its *raison d’être*, and a constant striving for people to better their lives through innovation and technology has been common to the people in this important nexus of world trade.

When the ancient Silk Road disintegrated from political instability circa 1400-1700, merchants turned to the high seas for alternative routes, stimulating an era of great voyages.

Legends were revived that matched the needs of the time, like that of Sinbad the Sailor, a Homeric figure who travelled the seas off East Africa and South Asia, encountering magic and monsters around 1,300 years ago. While Sinbad was a fictional character, much mythologised in books and films, another adventurer plied the same waters about 700 years later. However, that adventurer was no myth to match the times – he was very, very real.

Zheng He was a mariner, diplomat, explorer and eunuch that led one of the world’s greatest armadas from China to the Arabian Peninsula and even the east coast of Africa. He returned to China from one voyage with a giraffe in 1414.

Trade to and from the region was exotic indeed – but persisted. The Strait of Hormuz, as well as the Suez Canal – which was built in later eras to connect with the Mediterranean – are still two of the busiest shipping lanes in the world, connecting Europe and even North America to the east coast of Africa, the Indian subcontinent and onwards to Asia and Australia.

Hutchison Port Holdings Limited (Hutchison Ports) is a major link in this venerable chain of trade. The port giant operates in 49 ports spanning 26 countries across the seven seas. Among them, 24 locations in 19 countries are along the 21st-century Maritime Silk Road, far more than any other port operators. Its Middle East and Africa Division currently operates seven container terminals in six countries: Pakistan, Oman, Saudi Arabia, The United Arab Emirates, Tanzania and Iraq. One more port in the region, in Egypt, is managed by its Europe Division. The Middle East and Africa Division started operations in 2001 – a rather new addition to the family. It handled a total of 3.8 million Twenty-foot Equivalent Units (TEUs) in 2016 and is a leading operator in terms of its diversified portfolio and number of ports in the region.

**ONE SEA, ONE ROAD**

“The long-term outlook for this region remains very strong, given the size of the population and the import and export volume ratios versus various key economic indexes,” says Andy Tsoi, Managing Director of Hutchison Ports Middle East and Africa Division. “Many countries are witnessing expansion in key infrastructure developments and the ports will complement these kinds of developments because most infrastructure projects will need materials from overseas.”





● Hutchison Ports operations

## Smooth Sailing on the Maritime Silk Roads

China's Belt and Road Initiative could be a game changer, reshaping the economic topography of the Eurasian continent, comprising around 60 per cent of the world's population and 30 per cent of global GDP. This ambitious strategy of the government of the People's Republic of China aims to financially, technologically and institutionally support the development of countries along the ancient Silk Road land route as well as the Maritime Silk Road, covering maritime routes from China to Europe.

With more than USD1 trillion of infrastructure investment already pledged by the Chinese government to various projects over the next five years, the ambitious strategy will bring the vibrant East Asian economic zone closer to its European counterpart, while offering enormous growth opportunities to the developing countries along the two routes.

It takes visionary leaders to help realise this grand initiative. Hutchison Ports began expanding the port businesses along the new Maritime Silk Road years ago. It now operates 24 locations in 19 countries along the route, with a combined annual throughput of 70.58 million TEUs in 2016, representing about 86.6 per cent of the company's total throughput.

As global trade grows and more opportunities for maritime logistics services arise in Asia and East Africa, Hutchison Ports is proactively rolling out plans to invest and expand its facilities and services. Expansion plans are already underway in the ports in Thailand and Oman, with advanced remote-control operation of the new quayside cranes designed to reap the full benefit of the fast-growing ASEAN and Middle East regions.

"The Belt and Road Initiative is like a wheel ... you can see that it is rolling out ...

running faster and faster, and the wheel could give itself impetus now," says Eric Ip, Group Managing Director of Hutchison Ports. "Hutchison Ports is always exploring new and existing terminal facilities to face the needs of the Belt and Road Initiative. We will develop our land and sea capacities in China, Southeast Asia, the Middle East and Europe to cope with the future growth of cargo transportation volumes."

The ports group is also looking into establishing a strong upstream business such as building warehouses, logistics parks and transportation services to meet the rising demand in countries like Pakistan, the UK, the Netherlands and Spain.

The routes may be ancient, but the investment being made is modernising infrastructure and connecting people in a truly contemporary way!

1869

Construction of the Suez Canal completed, reducing maritime journey between the Mediterranean Sea and the Indian Ocean by approximately 7,000 kilometres.

2001

Hutchison Ports Middle East and Africa Division starts operation.

2017

Hutchison Ports operates 24 locations in 19 countries along the 21st century Maritime Silk Road, far more than any other port operators.



Mr Tsoi is intrigued by the region and its challenges, many arising from a dynamic and diverse economy: "Operating in this region is something you don't learn in business school. I have never seen any country growing from zero to a hundred so fast. Everything is completed at such high speed and such large scale." But local speed and practices don't mean that Hutchison Ports abandons its core values or hard-earned business practices and procedures.

Mr Tsoi explains, "Hutchison Ports focuses on planning and is constantly finding ways to connect as the middleman between local partners and governments to send one message: Master planning is more important than short-term targets."

Where opportunities to trade exist, people of all nations must learn to work together. Hutchison Ports' port in Saudi Arabia has staff from at least 10 different countries. While this ensures a cosmopolitan workforce, it also demands thoughtful staff management.

"The complexity and sensitivity of managing people from different cultures and ethnic groups are a critical factor when it comes to good governance," explains Mr Tsoi. "To enhance a healthy working environment and to meet the challenges in the region, Hutchison Ports strives to build up an international management team." Previous and current examples include a Native American in Tanzania, a native Brit in Saudi Arabia and Pakistanis in Oman.

**"Operating in this region is something you don't learn in business school. I have never seen any country growing from zero to a hundred so fast. Everything is completed at such high speed and such large scale."**

Andy Tsoi  
Managing Director  
Middle East and Africa Division  
Hutchison Ports



Galleons, triremes, dhows and now mighty container ships: The Maritime Silk Road has its heart in the Middle East – and Hutchison Ports.

"Our fundamental values in people management will always be honesty, and strong partnerships with customers and employees. But there are other complexities that make doing business in the Middle East and Africa region very challenging and interesting at the same time," he adds.

**EXPLORING THE LAST FRONTIER**

The port in Tanzania, in particular, demonstrates Hutchison Ports' commitment to the long-term success of both the company and the local community. The port in Dar es Salaam is crucial to the nation's trade – over 75 per cent of national trade flows through Hutchison Ports Tanzania. As Hutchison Ports' only footprint in Sub-Saharan Africa, Tanzania joined the portfolio as part of an acquisition in 2001 to also serve neighbouring landlocked countries such as Uganda, the Democratic Republic of Congo and Zimbabwe.

"We initially spent a lot of time upgrading equipment. Now we focus more on training local talent and bringing in new technologies to make trade in this part of the world more efficient and cost-effective," says Mr Tsoi, noting that a lot of positive changes have been wrought by the new administration under President John Magufuli since November 2015.

"As a private foreign investor in Tanzania, we are 100 per cent committed to

supporting development to complement and add value to the president's social and economic strategies whenever needed.

"East Africa is an important gateway to Africa, which we strongly believe is the last frontier with untapped resources. Ultimately, the port development will facilitate economic growth and urbanisation."

**PLANTING FOR THE FUTURE**

The story of the Middle East has thus been a story of trade, and with trade naturally comes human movement and knowledge circulation. It was therefore no coincidence that two of the most symbolic books in the Middle Ages – one a travelogue on Marco Polo's journey and the other a historical compendium that for the first time included cultures and major events from China to Europe – were both written at the turn of the 14th century when the safety of East-West travel was ensured by the Mongolian khanates.

In antiquity, cities like Baghdad and Istanbul stood as the centre of classical studies, which at that time included maths, the sciences and engineering. In the Bayt al-Hikma (House of Wisdom) library in Baghdad, whose foundation can be traced back to eighth-century, scholars – not just Muslims but also Jews and Christians – were brought together to share knowledge as well as to translate and preserve classical learning.

Many innovations originating in the region were unmatched by their Western counterparts for centuries. The battery seems a rather modern invention, accredited to Italian physicist Alessandro Volta at the turn of the 18th century. An alternative narrative suggests that a set of artefacts, commonly dubbed the Baghdad Battery, were able to create the effects of electroplating as early as 250 BC. Other ingenious inventions and discoveries - including algebra, universities, hospitals, coffee, clocks, cameras, a proto-flying machine and even toothbrushes - find their roots in the Arab world.

The Hanging Gardens of Babylon (circa 600 BC), however, employed that classical knowledge, including advanced water management reminiscent of Hutchison Water Holdings Limited's grand water solutions for the arid region. The Gardens, with all manner of flowering plants rooted on ascending terraces, showcased the architectural brilliance of ancient Middle East civilisations, inspiring awe in travellers for their lushness in a desert, made possible by innovations in water technology.

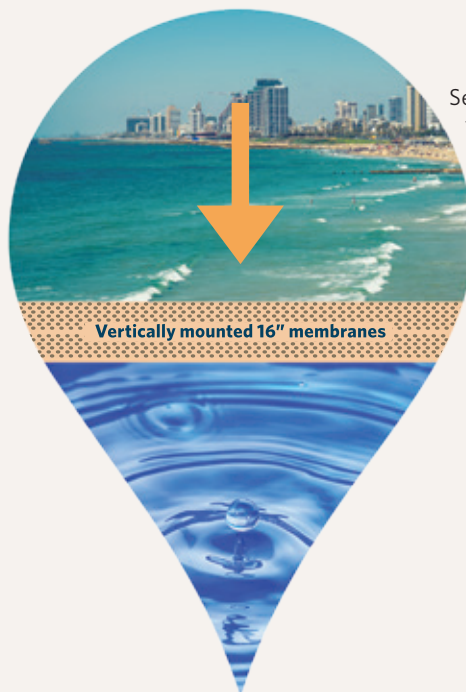
**FROM LOWEST TO HIGHEST**

As the world is increasingly hit by severe droughts, new technologies that can ensure sustainable sources of clean water are urgently needed. Israel has set a high bar for the rest of the world when it comes to bringing innovation to water management.

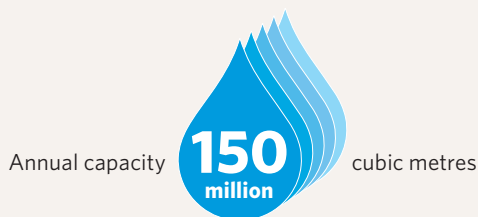
From an arid country constantly facing a dire water crisis, Israel has achieved the impossible feat of producing water in quantities which relieve the agonies of drought and assure an ample supply of fresh water for all residential, industrial and municipal purposes. Formerly, the government monitored the water levels at the Sea of Galilee daily, fearing a need to severely ration distribution of its waters to Israelis. But now, the Sea of Galilee - the largest freshwater lake in Israel and the second lowest lake in the world at 212 metres below sea level (after the Dead Sea saltwater lake, also in Israel) - enjoys predictably safe water levels, made possible by the application of water-saving technologies and management.

Hutchison Water and its family member Hutchison Kinrot have played a crucial role in this water revolution. They are modern-day global leaders in bringing clean water and smart water systems to the region and beyond.

**SOREK DESALINATION PLANT**



Clean water for **1.5 million** people



Annual capacity **150 million** cubic metres



The Sorek desalination plant, located 15 kilometres south of Tel Aviv, became operational in October 2013 and houses one of the world's largest and most advanced reverse osmosis seawater treatment facilities. With an annual capacity of 150 million cubic metres, the plant is able to deliver clean water to more than 1.5 million people, representing around 20 per cent of municipal water consumption.

#### CLEAN AND GREEN

The Sorek plant has set a number of benchmarks in terms of desalination technology, water cost and environmentally friendly standards. It has its own independent power plant which runs on natural gas. Excess energy is sold to the national grid – not vice versa. The plant is also equipped with devices, including an energy recovery system, that drive additional efficiency resulting in a smaller carbon footprint.

“The project gives us great satisfaction in seeing that water technologies we implemented have established a sound foundation for regional cooperation. The water produced in Israel has not only released the country from dependence upon scarce and insufficient rainfall, but it also helps quench the thirst in neighbouring countries as well,” says Dr Dan Eldar, Executive Director of Hutchison Water. “Providing water to Jordan, for example, demonstrates that the technologies we are using not only produce water but also change the form of cooperation in the Middle East and enable regional partnership rather than conflict.”

**“The project gives us great satisfaction in seeing that water technologies we implemented have established a sound foundation for regional cooperation.”**

Dr Dan Eldar  
Executive Director  
Hutchison Water Holdings Limited



Sorek brings fresh water to Israel, the lifeblood of a desert nation.

Amikam Cohen, CEO of Hutchison Water, adds, “We are looking forward to implementing the technologies and the project management capabilities, which have been developed in Israel, in other parts of the world.”

#### OASIS OF THE FUTURE

Water is important enough for the company to have multiple interests at play in the sector. Based in Israel, Hutchison Kinrot serves as the family's technology arm and as an incubator focusing mainly on the commercialisation of water technology and “cleantech”. Harking back to the ancient tradition of trade and innovation, the firm connects entrepreneurs, investors and key industry players around the world. It has become a prominent leader in the region, providing solutions for water utilities, industrial companies and municipalities, helping them to manage their business operations.

One notable start-up funded by Hutchison Kinrot is Aquarius Spectrum which provides cloud solutions (of the Internet cloud variety, not vapour laden) to provide leak detection. According to Dr Eldar, water wasted as a result of leakage from various sources can account for 40 per cent or even 50 per cent of water which flows through certain cities. Through cloud solutions and the application of advanced analytical algorithms, Aquarius Spectrum helps manage and monitor networks of

pipes with sensitive and low-cost acoustic sensors which enable cities to identify leaks as small as one millimetre in diameter across their infrastructure.

Aquarius Spectrum's smart and effective monitoring system has already been deployed in more than 600 kilometres of pipe in Israel and has expanded to the United States and Europe. It was named as one of the four Israeli start-ups – and the only one in Israel focusing on water technology – on the 2016 Global Cleantech 100 Ones to Watch list.

Another start-up, HydrosSpin, offers smart devices to support smart water networks in the modern water distribution system. These devices, mini-generators that convert water-generated kinetic energy into electric hydropower, are installed in city pipelines to generate electricity and to also enable real-time water quality measurement and network management. To date, the solution has already been widely deployed in Asia, Europe and the two Americas.

The solutions may be modern, but the ancient tradition of connecting people through trade, often on the high seas, remains. That interaction leads to innovation that enables people to live better, safer, happier lives – a civilised proposition for the cradle of so many civilisations. □





ENTERPRISE

# LET'S PARTY! LET'S CELEBRATE!

The Cheung Kong Group joined the celebrations of Hong Kong's 20th anniversary, launching with an official ceremony at Oriental Plaza in Beijing. The fanfare continued at the 20 x 20 Jam Party, a celebration of music across genres and across Hong Kong.

Hong Kong residents explored the mainland, enjoying 50 per cent discounts on Cheung Kong Property's hotels, and lucky customers of A S Watson retail outlets even won free trips to the capital!

HK Electric encouraged customers to go green with cash incentives to sign up for paperless eBilling, while Watson's Wine treated connoisseurs to bubbly discounts on champagne. Artists also got in on the fun in a big way, decorating containers at ginormous graffiti workshops hosted by Hutchison Ports HIT.

"HKXP" events, featuring eSports and virtual reality (VR) experiences, were organised by the Li Ka Shing Foundation, with the legendary Manchester United Class of '92 kicking the events up to a higher gear!

Across the Group and across China, the Cheung Kong Group brings the celebration to the people! ■



## CELEBRATION

# THINKING INSIDE THE BOX



The Port of Felixstowe celebrates 50 years of containerised shipping, which launched its growth and defined its character.

**R**aymond Bull, Stevedore and Wharf Superintendent, 1959-1976, recalls “I remember the first container being unloaded ... The very first container wot come to the dock.”

With that, Felixstowe became Britain’s leader in a revolution that would make modern society possible. Global trade today would be the barest hint of the massive force it has become. The adoption of the standard container, a steel box that can be quickly transferred from train and lorry to ships, very soon did away with the millennia-old practice of packing ships willy-nilly.

Felixstowe embraced the modern era of logistics on 1 July 1967, when Raymond Bull was a much younger dockworker. The single ship-to-shore crane stood on the New South Quay – now known as the Landguard Container Terminal – and only 152m was dedicated to this new-fangled technology. Fifty years of development has led to today’s Felixstowe boasting nine berths, over



3,000m of deep-water quays and 31 ship-to-shore cranes. Expansion of all parts of the port, from rail development to new berths to accommodate the biggest mega vessels, will see a modern Felixstowe that is faster, cleaner and more vital to the future of Britain and global trade.

## THE REVOLUTION

While container-type arrangements had been used in the past, it was the standardisation that drove efficiencies which made global transport cheaper and more efficient. An American businessman, Malcolm McLean, fought governments, unions and other vested interests to create the first dedicated container ship. He believed in the efficiencies to be gained in packing more cargo into a ship and reducing time at ports, meaning the asset could be at sea earning money. He was, of course, right.

Those efficiencies lowered the cost of everything moved by ship. The Undercover Economist, Tim Harford, explains that a study of a standard cargo ship from 1954 showed that it cost about USD420 in today’s currency to ship a tonne of goods. Today, that number is about USD50 – or less.

The “Box” drove an explosion of global trade. Loading and unloading times were slashed. Sealed containers meant that theft plummeted. Safety increased dramatically. Containers were more stable, so shifting and breakage were reduced. Shipping of goods that previously took months could now be executed in weeks.



On a human level, lives have been elevated by the advent of the container. As Clemence Cheng, Managing Director, Europe Division, Hutchison Ports, explains, "The volume of trade made possible by the container has lifted large parts of the world out of poverty and continues to help developing economies to grow, and developed economies to prosper." Indeed, according to Mr Cheng, "A world without the container is unimaginable."

**CONTAINERS AND HEART**

This transformation started in Britain with just a few men. A number of that small complement of workers in 1967 – numbering perhaps 100 – reflect on the day that Britain joined the container revolution. It was personal.

"It was like in the forces, when I was in the Royal Air Force. You were with a group that becomes family. It's the same on the docks. You all worked together, looked after each other," said Bill Gordon, who worked on the docks from 1961 to 1991. The modern concern for safety was a real eye-opener for him. As he says of the men who worked on the docks then, "We were a rough old lot in those days ... It was a tough job and you had to be [tough]."

Of course, Felixstowe's family is much bigger now and over 2,500 people work at the port, with many more supported by the port's activities. Mr Cheng explains that Felixstowe has become, "A port that supports tens of thousands of jobs locally and adds hundreds of millions of pounds of value each year to the wider economy."

Many of those employees and their community have been celebrating the 50th anniversary – a quinquagenary – with company-supported family outings, including marching in the Felixstowe Carnival under the Port of Felixstowe banner. A jubilant dinner was held on the pre-container era cargo sailing ship, the tea clipper *Cutty Sark*, at the Royal Museums Greenwich, London. Civic leaders, foreign dignitaries and community supporters joined the celebration.

Those celebrants can look to a future that will embrace modernity as much as Felixstowe did 50 years ago. Recently, modernisation has meant expansion on land together with deepening of the approach channel (through dredging) to make way for the next generation of mega vessels, carrying up to 21,000 TEUs (twenty-foot equivalent units). Berths 8 & 9, the latest expansion, provide 920m of quay with 18m of depth alongside. Eco-rubber-tyred gantry cranes help make Berths 8 & 9 the lowest carbon container terminal in the UK.

A doubling of capacity, through rail development and new rail-mounted gantry cranes in recent years greatly improves operational efficiency. More rail works to be completed in 2019 will allow up to 45 freight trains a day to run in both directions.

While the port itself was founded in 1875, containerisation transformed its fortunes and has defined it for the past 50 years. Felixstowe continues to fully embrace technology to better serve its community, its nation and global trade. □

Then and Now: The Port of Felixstowe has grown in leaps in bounds from its first container-moving crane to the recent opening of Berths 8 & 9 to accommodate the world's biggest container ships.



1967



1993



2017



Mindful leaders shape new destinies for humanity. Like ballet dancers, their transcendence results from a struggle that shapes their personality and virtuosity.

VISION

# EYES WIDE OPEN INTO THE FUTURE

Mr Li and Nobel laureate Mo Yan spoke of the mental strength needed in an uncertain world.

**S**hantou University may be a relatively young university, but it has classic touches which those at older schools would recognise. At his annual address to the graduating class, Mr Li Ka-shing spoke of the joy of “strolling along the glowing golden flowers” and listening to the “chimes from the bell tower”. But his eye is firmly fixed on the future of the graduating students.

At almost 90 years old, he could feel the enthusiasm of the students and claimed that if he could only “bottle the positive energy [in the graduation ceremony hall]” it would last him another 90 years. Graduation day is replete with enthusiasm, but he warned about the challenges that lay ahead and the emotional and moral perils that could lead to “wilful blindness”.

**“Synthesise all facts, data and intelligence that capture your imagination into something new and to effect change.”**

Mr Li Ka-shing



**“Like swallows weathering through storms.”**

Professor Mo Yan  
Nobel laureate

**EYES WIDE OPEN**

Professor Mo Yan, the only Chinese national to have won the Nobel Prize for Literature, joined Mr Li and the assembled graduates. Professor Mo, in his words, encouraged the graduates “to be daring enough to encounter challenges, like swallows weathering through storms, and fear nothing no matter how mammoth the difficulties”.

Mr Li warned the freshly minted graduates against discouragement that could lead to the vision they now have becoming clouded. He asked them to be mindful of their obligation to “carry forward progress and development as exemplified in Confucius’s Analects”, and warned them of the fog that could descend if they were not aware.

He spoke of a wilful blindness that seems to strike many, describing those who turn “possibles into impossibles” as unthinking and as unfeeling. He said they would struggle to find their way in a world with challenges that come faster and faster. Echoing common complaints cited in popular media, he encouraged the young people gathered not to ape common tropes about being “crushed into conformity” or “straightjacketed inside culture”.

**BE, ACT**

Instead, Mr Li exhorted students to “strive to give a meaningful account of why they do exist”. He acknowledges this may be difficult “in the oncoming AI age”, and offered some guidance on how students should prepare for the next step in civilisation’s evolution.

Students will “need to have the mindset of a deep thinker, the skill set of a speed understander, [and] to be able to synthesise all facts, data and intelligence that capture your imagination into something new and to effect change”.

This mode of thinking will not be possible just by choosing it, however. Selecting this way of acting is the first step, wherein people become the “conscious agents that raise the achievable standard for everybody else and the mindful leaders that could shape new destiny”.

The next step, one that may consume a lifetime, is a process of “endless correction after correction”. Those who thrive in the future must “struggle against fatigue and pain to achieve masterful perfection”.

That struggle will provide the will to bring “structure and discipline” to their lives. Only then can they have this co-exist with “free-thinking creativity”. That is when students could truly come alive. Only then can they be “affective and driven”, allowing them to “leap into the future with generosity and gratitude, with confidence and imagination”.

He closed his inspiring comments by encouraging the students to “Live your life to its truest, in duty, in dignity and aspire to a world of openness and change.” □



Chairman Li Ka-shing and Professor Mo Yan (top, in orange) took aim at modern existential angst to bolster realistic optimism and a can-do spirit in the graduates of Shantou University.





## INNOVATION

# MAN + MACHINE = ULTIMATE SHOPPING EXPERIENCE!

A vast array of new technologies is changing retail. But A S Watson Group hasn't lost sight of the fact that it's all about people.

**A** brilliant misquote of Mark Twain (aka Samuel Clemens), "The reports of my death are greatly exaggerated," describes to a tee the state of in-store retailing. Retail oracles conjure up visions of a future where our slightest whims will be answered by an Alexa-type device which reads our minds and whisks to our homes the objects of our desire. The fact remains, however, that stores are still where the vast majority of people find delight and satisfaction when fulfilling their needs. This is true due to one simple fact.

People love shopping. Not like. Love.

They love getting out of their homes and going to stores to shop.

More than staring at their phones, they like taking objects off a shelf, examining them, and making a decision. They like to taste, to try on, to see, to hear and to feel before they buy.

Across Asia and Europe, A S Watson Group (ASW) is in touch with this reality, with staff meeting people every day in over 13,500 outlets. However, the retail group hasn't gotten this far by standing in the past. Technology ranges from that which is front and centre to the ghost in the machine. Sometimes you see it, sometimes you don't. Like a great magician, most of the work happens behind the scenes until the great reveal that delights and excites. For different people, in different outlets, online and offline, many different technologies and

new management approaches have revolutionised the common human experience of shopping.

### HANDS-ON, BUT CASHIER-FREE

One of the stranger experiences for those older shoppers (over say, 25) will be the possibility of cashierless shopping in the future. The pangs of unearned guilt they may feel from walking into a store, furtively filling a bag and then walking out 'without paying' may be the strangest of shopping experiences! For younger shoppers, this may become an unremarkable part of a normal life as far back as they can remember – like mobile phones for millennials. Bobby Ho, Head of Group IT Asia of ASW, is working on the wide range of technologies that need to be deployed to make this new way of shopping possible.

**“With the help of more advanced devices and stronger analytics tools, we can also capture customer touchpoints in our physical stores and convert unknown store traffic into known customer interactions.”**

Mandy Ng  
Group Project Director  
A S Watson Group

“As consumers become more mature in accepting new ways of shopping, technological innovation opens up opportunities to enhance the customer experience,” Mr Ho says. “This in turn enables better integration of all our sales channels and platforms. These are genuine omnichannel experiences.”

It begins with self-checkout. The technology has already been deployed, in one form or another, in many places around the world. It requires the shopper to act as their own checkout assistant by scanning products at the point of self-checkout.

It has had its fair share of challenges, as frustration with checkout failures, perhaps due to creased or otherwise unreadable barcodes, can lead to shopper rejection of the technology. When it happens with a cashier, they simply enter the barcode manually, but the shopper can't do that at the self-checkout.

Shoplifting can also be a problem, even inadvertently from honest buyers who simply lose their composure following a self-checkout failure and head for the door with a product instead of taking it to a manned checkout.

ASW teams have a variety of people and technology-based practices to solve these problems encountered by many in the industry. Even if the world is not quite ready for pure self-checkout yet, that doesn't mean that significant gains in customer experience and efficiency can't happen.

On the human side, simple fixes can do the trick. From drugstore Rossmann in Poland to Watsons Malaysia, staff will be able to support self-checkout lines to make sure shoppers don't feel frustrated and then reject self-checkout, perhaps forever. “Call assistance” buttons can bring those staff into play to alleviate minor frustrations. A helping hand and friendly voice can go a long way to promote customer adoption.

#### **EYES ON THE PRIZE**

Camera technology has also advanced dramatically to provide greater resolution, improving the blurry black and white

images known to us from crime TV. But Mr Ho tells us that the technology isn't as important as the experience of using it. The installation, positioning and configuration of cameras has become just as important as the cameras themselves. Knowing how to position them can give full coverage of the entrance to measure traffic count and derive conversion rates (measured as the number of shoppers compared to the number of visitors) for the business. Those tempted to head for the door without paying may not know that camera technology can also be deployed as a big part of the self-service operation.

So cameras are looking at regular shoppers and even products to find better ways to serve customers, not just to catch them red-handed. Without needing to collect personal data, a great deal of information can reveal to analysts which parts of stores are most visited, suffer the most congestion, or invite the most leisurely lingering as people collect information on products or even try them out. The positioning of products can be tested to see which configurations provoke people to look, pick up, and, ideally, purchase a product. With proper responses to such intelligence, customers will theoretically find stores more engaging and stimulating.

#### **ALWAYS AT HAND**

Nothing is more frustrating for shoppers than making a trip to the store, only to find that what they're after doesn't appear to be in stock. ASW is deploying an array of new technologies to ensure that doesn't happen, from online shopping to real-time stock and ESL technology.

Far from “English as a Second Language”, the ESL in retail stands for Electronic Shelf Labelling. Originally, ESL was deployed to support dynamic pricing while the product was still on the shelf, allowing retailers to change prices on the fly. In countries like China, where QR codes are ubiquitous, they could be used to help provide product information. ASW's Store Technology teams under Mr Ho are now using the technology, combined with real-time stock information, to make sure that if the product is in the store, it isn't languishing



ASW uses advanced technologies to analyse and track their products in store so that shelves are kept fully stocked and customers are provided with the most current information.

in a backroom storage area while shelves go empty. Extending the reach of the tech further will see the real-time information automatically inform reordering needs to ensure that hot products don't disappear off the shelves at times of shoppers' greatest interest.

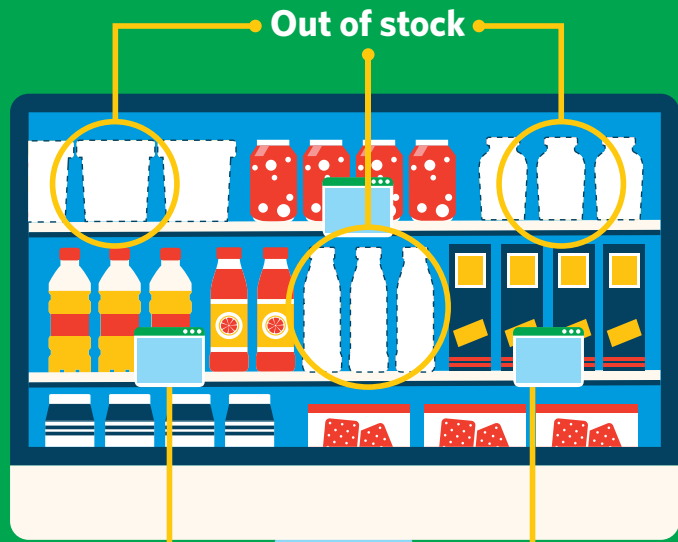
After all, it's about keeping the shelves stocked. This tech is expected to play a role in the staff-free stores of the future, but while small tests have been run in outlets in the US and China, no one has really cracked the code of purely staff-free stores.

**HUMAN TOUCH**

Mr Ho explains that in many stores, people want the interaction and shopping advice that people bring. He cites the beauty and wine businesses as two segments of the retail group's business that remain high touch. That touch is important, but here, technology can help again.

Marionnaud, in France, has staff working with iPads with custom apps to quiz consumers and make recommendations using the app's suggestions, blended with the sales staff's expertise. The technology doesn't replace people, but instead helps them.

Andrew Ma is the retail group's Head of eLab Technology, Asia. He's optimistic that in the future, people may be able to come into a store and, under the guidance of trained professionals, experience products using AR (augmented reality) and VR (virtual reality). While VR is famous for the



Missing promotion details

Inaccurate price



**“Technological innovation opens up opportunities to enhance the customer experience.”**

Bobby Ho  
Head of Group IT Asia, A S Watson Group



encompassing headgear that creates all-around experiences, AR has a more 'in this world' effect. It takes what you see around you and adds to it.

"Whether AR can become mainstream depends on market trends ... there are a lot of opportunities with AR technology, in particular for beauty and health products," says Mr Ma. Some of that tech is being used in ASW stores already. In a flagship store in Shanghai opened in April 2017 to mark Watsons China's 3,000th store milestone, two intriguing services, namely "Style Me" and the "Skin Test", have been introduced. Style Me uses AR to provide a virtual make-up service. By seeing the make-up on their faces without actually using the product, shoppers can try out a wide variety of items at a lower cost. They can work with in-store beauty specialists who can make suggestions from a seemingly endless palette of colours that can be applied to eyelids, cheekbones and lips.

"The novel shopping experience - and the high flexibility offered through customisation made possible by AR technology - will help shape the future

of the online and offline shopping experience," adds Mr Ma.

### TREASURE ISLAND

The Skin Test product, also in the Shanghai stores, makes use of biometric data to give advice to clients. That advice is driven by data analytics.

Data analytics have become a big part of customer relations in the industry, and ASW is leading in this area through the efforts of its eLab and tech teams around the world. All those aforementioned cameras, ESL, customers using AR and just plain old buying decisions generate stunning amounts of data. People often mistake the data for some kind of treasure. A better analogy would be to say it is the whole island - the treasure is the actionable insights.

The map comes from a range of analytical tools. One big map maker and industrial excavator looking for treasure is ASW's partner, Rubikloud, from Toronto, Canada. Over the next three years, their data enterprise platform, known as the Rubicore, will be deployed at the 13,500+ outlets across the retail group. It will plug into this vast data-generating machine and apply artificial intelligence to scour the data landscape for insights. It will help to amplify

the power of direct targeting for consumer marketing campaigns, in both bricks and clicks environments. It will be a huge helping hand - driven by machine learning - for the leadership of ASW, as they design everything from in-store promotions to region-wide cross-brand initiatives.

"We have been gathering a variety of physical store transaction data and online platform customer behaviour data for years. But now, with the help of more advanced devices and stronger analytics tools, we can also capture customer touchpoints in our physical stores and convert unknown store traffic into known customer interactions," says Mandy Ng, Group Project Director, who oversees the big data analytics team.

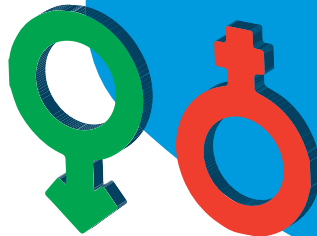
This will also feed into the logistics aspect of the business in a way that wasn't possible before. "Regression was the way to go when we carried out promotion forecasts in the past. One issue with human logic is that it would sometimes provide inaccurate predictions if there was no track record for certain products," Ms Ng explains. "Through sophisticated transformation of human logic to machine language, it is possible to set out assumptions in a more cost-efficient manner, bringing together the member database, customer transaction database, planogram information and more to make forecasts to improve promotional efficiencies, driving more sales." That also means more customers getting what they want, when they want, where they want.

The future of retail sees a wide range of devices watching, advising and delighting customers. These will help staff to make decisions and free them up to spend more time with customers, who will sometimes be dealing with the new technology, and sometimes just be enjoying the shopping experience. The intuition of great retailers about what people want and how to reach them has been buttressed by artificial intelligence to help make faster decisions, better decisions and even to automate decision-making. However, the ASW way has been to never lose sight of the customer - even when using better technology to keep track of them! □





**DATA ANALYTICS**



**AGE GROUPS**

- 18 -25
- 26-30
- 31-40
- 41-50

