

Sphere

#34 2013



INTERNATIONAL JOURNAL OF THE
HUTCHISON WHAMPOA GROUP

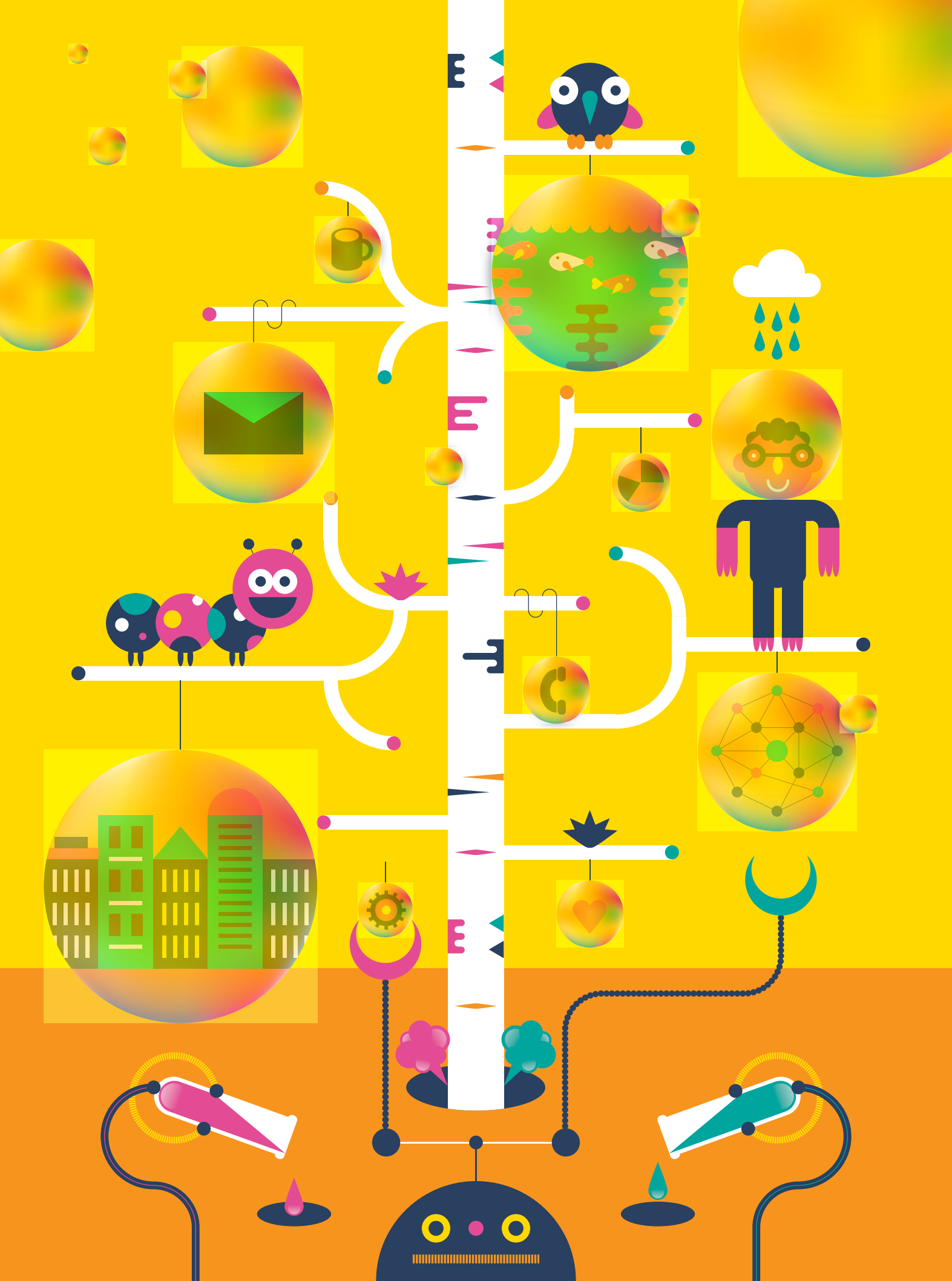


CONTROL ROOM COOL

- 20 Control Room Cool
- 10 The WHAM in Hutchison WHAMpoa
- 14 Dutch Dynamics
- 30 Storming the Ivory Towers
- 36 Your Photos, Global Winners



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Sphere Magazine #34
December 2013

Cover Illustration
By Gareth Leyshon

The cover illustration conveys the notion that the control room of any organisation requires both the head and the heart. Having a vision for the present and the future, and the unique ability to always see the bigger picture with every small detail - all at the same time - it implies the idea that to control is to understand the alchemy of interconnected processes.



The revamped Sphere aspires to capture the knowledge within HWL at the frontier of discovery and make it known.

W E L C O M E

EXPANDING THE SPHERE

"Knowledge is like a sphere, the greater its volume, the larger its contact with the unknown." Blaise Pascal (1623-1662)

If that be the case, Hutchison Whampoa has immense contact with the unknown.

With some 260,000 employees constantly pushing at the boundaries of knowledge, HWL is encountering the unknown and finding a path forward.

The revamped *Sphere* aspires to capture the knowledge within HWL at the frontier of discovery and make it known. Our thirst for knowledge aligns with the tradition of exploration of the Dutch. The home of merchant-explorers like Schouten, Tasman (yes, of Tasmania fame), and Hartog has been fertile ground for the merchant-explorers of our Group. Ports, retail and cutting edge waste-to-energy firms are part of the Group's success story in the Lower Countries. Find out what it means to be Going Dutch in these pages.

The benefit of past exploration also means we can sit solidly inside the sphere - like in our control rooms around the world. From

ports to power, HWL's Control Rooms monitor and guide the resources needed by billions of people every day. The people, equipment and software deployed are all derived from our vast collective experience in massive operations.

HWL expands the sphere through worldly experience; universities from the ivory tower. But today's universities are reaching around the globe to find new partners. Our Chairman makes it possible. This year, the Li Ka Shing Foundation enabled major academic partnerships between schools from Israel to China to Canada.

Wherever Pascal's sphere is being expanded by Hutchison Whampoa, this *Sphere* wants to know. Tell us with your letters to *Sphere*, and never shrink from the boundary with the unknown. □

Hutchison Whampoa Limited 

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CONTENTS

0 4

NEWS BITES

Ports and Related Services
Property and Hotels
Retail
Telecommunications
Infrastructure
Energy

And more...

1 0

SPECIAL FEATURE



WHAM, HWL's in-house brand builder, designed the revamped Sphere. Find out about the work they have done to make HWL companies brand leaders.

1 4

ENTERPRISE FEATURE

Going Dutch: The Lower Countries and Higher HWL Aspirations

The Netherlands have a history that far exceeds expectations for a relatively small country in the heart of Europe. The Dutch have led the world in commerce, adventure and now clean tech. Find out about how HWL has found the best of The Netherlands.



2 8

OPERATIONS FOCUS

Ports, Planes and People: HPH in The Bahamas

The island of Grand Bahama may only have 52,000 people - but that is no barrier to serious business. This tiny island houses a range of HWL businesses in The Bahamas, including the Group's only airport.

3 0

PHILANTHROPY FOCUS

Technion and STU - Destined for a great future

The Li Ka Shing Foundation has made the largest ever donation to an Israeli university to establish a Technology Institute with Shantou University in Guangdong. The USD130 million will help to merge Israel's innovative achievements with China's massive scale of education.

Phoenix & Martlet: Two Mystic Birds Forevermore

The phoenix and the martlet meet as the Li Ka Shing (Canada) Foundation enables exchange and learning between McGill and Shantou University. Look for growth in understanding in the legal, business and arts sectors between China and Canada.

3 6

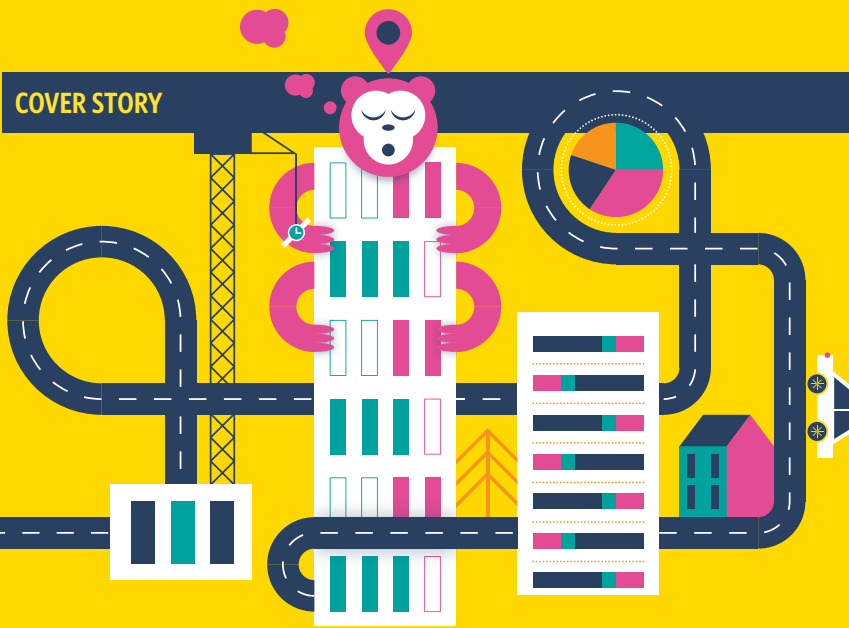
HWL PHOTO CONTEST

The winners are in! Check out the top three winners in four categories as 127 members of the HWL family were "living in the fish eye lens, caught in the camera eye."



20

COVER STORY



40

FINAL WORD

Global Connections in Higher Education

The Li Ka Shing Foundation has repeatedly backed global university connections. Why?

CONTROL ROOM COOL

HWL companies manage huge projects with billions of moving parts. At the centre of it all: The Control Room. Who - or what - are the brains that ensure that the grand dance of power, ships, and waste flow to the places they are needed?

Sphere takes a good look at four Hutchison Whampoa companies with high performing operational management and control - Hutchison Port Holdings; Hongkong Electric; Northumbrian Water; and AVR.



ENERGY

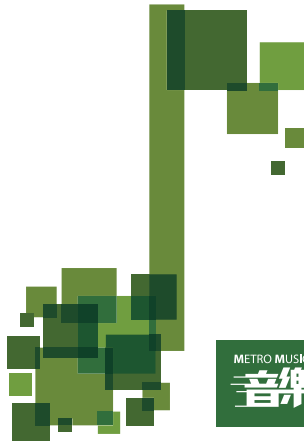
BRIDGING COMMUNICATIONS ALL ROUND

About 30 Customer Liaison Group members of Hongkong Electric attended a meeting in September to share their views on the company's customer services, tariff structure, corporate communications and community services. This meeting enhanced communications with stakeholders and resident representatives, and provided another direct channel for dialogue and cooperation with the community.



NOURISHING BODY AND SOUL

Hongkong Electric and Baptist Oi Kwan Social Service have recently joined hands to launch a HKD10 hot meal service to help ease the financial and emotional burden of those in need in Eastern District on Hong Kong Island. The project, sponsored by HK Electric and supported by the company's volunteer team and partnership funding from the Government, was kicked off in August this year, serving more than 70 meals a day to the underprivileged. Apart from the meal service, Baptist Oi Kwan also holds regular health talks on pressure handling and emotional support, and provides a referral service for those needing professional counselling and follow-up. Assistance on job hunting is also provided.



TELECOMS

GREEN MUSIC CHANNEL

Metro Broadcast's Music Digital channel was officially launched on 17 September. Taking music as the main focus, the channel brings a series of brand new music programmes, which invite famous figures to be guest DJs playing worldwide pop masterpieces. It also aims to be a "Green Channel" and promote environmental protection by way of the airwaves.

PROPERTY

UK – Mayor of London visits Chelsea Waterfront

The Mayor of London, Boris Johnson, attended a ground-breaking ceremony at Chelsea Waterfront, developed by Hutchison Whampoa Property on the eight-acre site of the iconic former Lots Road Power Station. When complete, the scheme will deliver 706 new homes in 10 buildings, and it will be the first riverside development of this scale on London's North Bank for 100 years.



PROPERTY

GRAND LAUNCH OF SHANGHAI REGENCY GARDEN

Shanghai Regency Garden Phases 2A-2, 2B-1, 3, and 2B-2 were successfully launched on 20-21 April, 25-26 May, 20-21 July and 24-25 August respectively. The whole residential compound comprises approximately 3.6 million square feet of residential premises and a kindergarten. The launches attracted an unprecedented number of customers and created good sales record.

“SING FOR I”

New Phase of Chengdu Le Parc, i-City held a series of marketing activities through different media to enhance exposure among the public. The first activity, the “Sing for i” singing contest, was successful. It attracted hundreds of professional singers and after over a month of competition, five of the best were showcased in the final stage on 19 October.



CORPORATE

Community care

HWL volunteers have been quite active. They visited Dialogue in The Dark (DiD), a global social enterprise seeking to broaden understanding of issues faced by the blind through having the sighted experience blindness in a variety of settings. They met the DiD activists and organised a mini party for them. They learned more about the daily life of visually impaired people and ways to communicate with them. They also organised a Mui Wo Love Exchange Tour, a gourmet adventure held in Mui Wo. In the event, the volunteers cooked different delicious food together with the elderly, and the locals taught the volunteers the secret of making sushi and local Hakka Chaguo (tea cake snacks).

TELECOMS

EXPAND THE MARKET WORLDWIDE

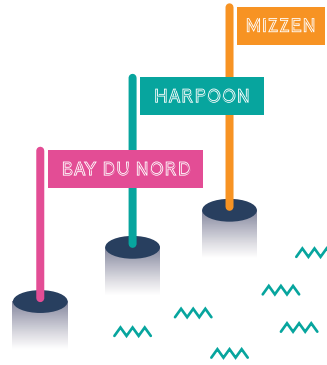
Hutchison Global Communications joined the METRO2C telecoms alliance in Europe, delivering connectivity and expanding its footprint to Ireland where US high-growth technology companies have set up European headquarters. Moreover, the Internet Data Centre services launched support for Tencent’s global operations on 11 September.

PROPERTY

RENOWNED REPUTATION IN HOTEL INDUSTRY

Harbour Plaza Hotels & Resorts received the Hotel Service Award 2013 by Capital Weekly for the third year in a row. For the fourth consecutive year, it received the award of Best Local Hotel Chain by TTG Travel Awards. Harbour Plaza Hotels & Resorts also gets the 2013 Asian Excellence Brand Award presented by Yazhou Zhoukan.





ENERGY

FLOOD RELIEF

Husky Energy made a CAD1 million commitment to communities throughout central and southern Alberta affected by the devastating flooding in June. This donation was distributed to organisations supporting basic human needs and flood recovery efforts in the hardest-hit communities.

NEW OIL SPOTS

Husky Energy's partner discovered three spots for crude oil in the Flemish Pass Basin offshore Newfoundland and Labrador. The discoveries will help open up a new producing basin in the Atlantic Region.



TELECOMS

PONY IN MARCH

An advertisement of Three UK showed a plucky little wonder horse moonwalking his way into people's hearts. The video achieved almost 10 million views online by the end of October. Check it out (Three - The Pony #DancePonyDance).



OTHERS

FLYING HIGH IN CHINA

Guangzhou Aircraft Maintenance & Engineering Company Ltd (GAMECO) announced the inauguration of the new Phase II Hangar in November. This is a significant milestone in developing GAMECO's maintenance operation. It provides the perfect answer to China Southern's ambitious fleet growth and expanding Chinese and worldwide third party demand for base maintenance.

The new Three says hello

On 19 August, a new era started in the Austrian telecommunications industry. The acquired brand "Orange" and the former 3 were integrated, the whole becoming greater than the sum of the parts. Employees have made every effort to ensure a successful launch and to welcome the 3.3 million customers in Austria.



4G
at no
extra
cost.
Permission
to extreme
Air Punch
granted.
Get ready for faster Internet,
without the hefty price-tag.
Three
Three.co.uk

The advertisement features a large, bold headline '4G at no extra cost.' Below it, a smaller headline reads 'Permission to extreme Air Punch granted.' A small image of a baby's face is visible on the right side of the ad. At the bottom, there is the Three logo and the website 'Three.co.uk'.

3 PUNCH COMBO

Three UK has created a few stirs through its service. It introduced its "4G at no extra cost" campaign in September, and also made roaming more affordable by allowing its customers to use the minutes, texts and data from their existing plans when roaming in seven countries. Apart from improving services, the firm has undergone a massive retail refit programme, bringing a wonderful in-store experience to customers.

New Buy

In August, a consortium led by Cheung Kong Infrastructure Holdings Limited (CKI) acquired AVR-Afvalverwerking B V, the largest energy-from-waste player in the Netherlands. The enterprise value of the transaction was approximately EUR940 million (approximately HKD9.7 billion). Members of the consortium include Cheung Kong (Holdings) Limited and CKI, each taking a 35 per cent stake; Power Assets Holdings Limited with a 20 per cent stake; and the Li Ka Shing Foundation Limited holding 10 per cent.



...Cheung Kong Infrastructure Holdings Limited acquired AVR-Afvalverwerking B V, the largest energy-from-waste player in the Netherlands.

TELECOMS

3 IRELAND NEW YEAR'S EVE FESTIVAL

The Three NYE Dublin festival, now in its third year, highlights the highly anticipated Countdown Concert on New Year's Eve at College Green and Dame Street. This year organisers are excited to announce an eclectic musical line up with Madness and Ryan Sheridan, and other exciting performers.



CORPORATE

"BEST BORROWER" AWARD

HWL received the Region's Best Borrowers in Hong Kong and Most Professional Borrowers in Asia: Investment Grade Corporate awards from *FinanceAsia* in 2013.



"Best Management" Award

CKI was awarded "The Best Managed Company in Hong Kong - Large Cap" by *Asiamoney* magazine in September due to its clear investor relations strategy.



Left: Marionnaud's Champs-Élysées store.
Below: Watsonsbaby, a first for Watsons.

BABY STORE

With its pledge to be “Your Personal Store”, Watsons Hong Kong opened its very first baby concept store in August, providing all the essentials of baby care for parents.



RETAIL

UNVEILING THE FLAGSHIP

The Champs-Élysées store of Marionnaud France reopened in November to modernise the brand experience and expression, offering a new luxury shopping environment which demonstrate the brand values of charming, expert and accessible in this iconic hub of French culture.

...a brand new luxury shopping environment which demonstrate the brand values of charming, expert and accessible...



LOVE IN PAINT

Watsons China has partnered with Huiling Community Service for People with Learning Disabilities, encouraging students from Huiling to paint delightful patterns on various items which are sold in their stores to raise funds for nurturing artistic talents in those with learning obstacles.

ANGELS OF FOOD

Thirty volunteers from PARKnSHOP Hong Kong teamed up with Food Angel, a food donation NGO, to reach the homes of elderly people to offer housework services, and distribute nutritious meal boxes made from the donation of surplus food.

FEEDING A GOOD CAUSE

In an effort to address Hong Kong's aging population in their community initiatives, PARKnSHOP Hong Kong partnered with the Young Women's Christian Association to launch the first ever food coupon programme for needy senior citizens in the New Territories. These coupons were distributed to the elderly, allowing them to redeem food and daily necessities from selected PARKnSHOP stores for free.



Above: Volunteers from PARKnSHOP visit an elderly home.

Left: Art work painted by Huiling students are made into bags.

Far left: Launching the food coupon programme at a PARKnSHOP store.

Right: Quay cranes at HIT.

NEWS

PORTS

Breakthrough

Hongkong International Terminals (HIT) became the first container operator in Asia to heighten two quay cranes in situ when it inserted three metres of steel into the legs of two cranes with the help of an innovative jacking frame. Apart from this piece of good news, Hutchison Port Holdings received a record number of calls from mega-vessels in 2013 including the world's largest container ship and the second of the Triple-E vessels, the 18,000-TEU Majestic Maersk at Yantian International Container Terminals.



Milestones passed

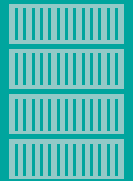
On 21 August, Port of Felixstowe in the UK moved its 70-millionth container. Westports Malaysia also moved its 50-millionth container in January.

70



MILLION CONTAINERS MOVED AT PORT OF FELIXSTOWE, UK

50



MILLION CONTAINERS MOVED AT WESTPORTS MALAYSIA

TELECOMS

3 + LINE + NTT DOCOMO

In September, 3 Hong Kong announced a tie-up with LINE Corporation and NTT DOCOMO Inc to offer LINE Data Pack services and the Menu Translator smartphone app respectively.

3 CITI WALLET

3 Hong Kong and Citibank launched "3 Citi Wallet", a mobile payment service, tailored for customers who are both 3 Hong Kong subscribers and designated Citibank Visa credit card users. "3 Citi Wallet" users can enjoy a hassle-free "Tap and Pay" mobile payment at over 9,000 Visa payWave readers, which covers more than 3,400 merchants in Hong Kong.

Left from top: Launch of 3, LINE, and NTT DOCOMO partnership; "3 Citi Wallet" in action.

APP AND TV

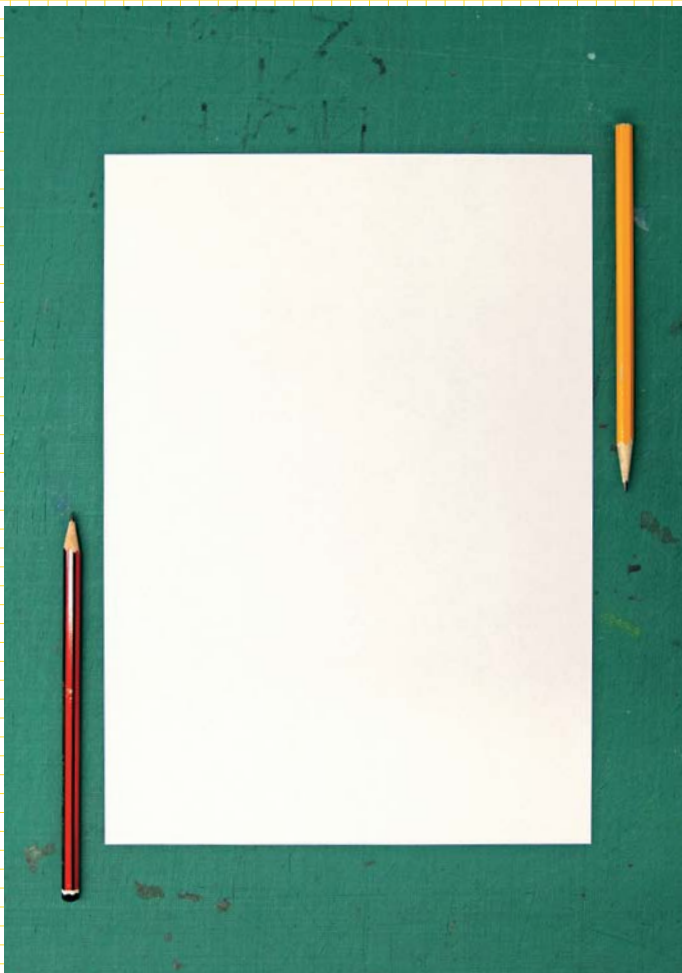
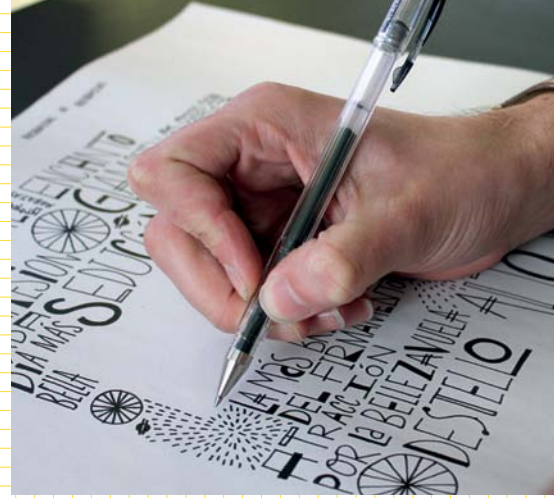
App "LA3", application offering extra contents and functionalities for the audience of 3 Italy TV Channel "La3", won an important award at the "SMAU APP AWARDS" as the best App for the category "Information, Media and Publishing".



PROFILE

PUTTING THE WHAM IN HUTCHISON WHAMPOA

The attitude that anything is possible has guided WHAM's design ethos and collaborative client relationships.



When HWL builds a brand, it goes big. After exiting Orange in Europe and preparing to launch Three, the Group recruited legendary brand guru Doug Hamilton to found a new company to put Three on the map. The new branding agency, 100% Hutchison owned, became HWL's International Brand Group. The agency that has rebranded so much of HWL rebranded itself in 2008 as WHAM. They were seeking an external facing image to match their status as a stand-alone company within the HWL family.

The new branding definitely captured people's attention. WHAM's new look and work for other parts of the Group caught the eye of head office. They contacted WHAM who presented their ideas for the revamped *Sphere*. Their creative seeds found fertile ground and the bold new look is the result. The end product of their work is in your hands – the newly revamped *Sphere* magazine.

The agency started with creative genius built by recruiting the best from around the world – often from inside the global HWL ecology. Darren Edwards, Head of WHAM, a digital user experience expert was brought in from Australia after working with Three. He sat down to speak to *Sphere* about the agency.



WHAM was commissioned to redesign *Sphere* magazine with the goal of reflecting the calibre and global nature of HWL businesses. Working with the editorial team, the new *Sphere* now has a clear focus on people, ideas, enterprise and culture. And it is through these lenses that content and designs are developed.

sphere

Below: Campaign for Three UK about the One Plan.



BIG SIMPLE TRUE

Doug Hamilton



FROM COOL TO COLD TO HOT

In the beginning, WHAM was located on Bond Street, London, in the heart of Tony Blair's Cool Britannia. When they were brought into the corporate office of HWL Europe, it seemed a bit of a dubious proposition. Hutchison House is situated in Battersea. At the time, the building was located next to an old bus depot (and was the former location of a go-kart track). On the day they moved in, a funeral of sorts was underway as bus-spotters were assembled taking photos of the last drive of the old Routemaster buses. This was the last year that this neighbourhood, which sits on a bank of the Thames opposite nearby fashionable Chelsea, was on the 'the wrong side of the river' – because HWL made it 'the right side of the river'.

That was then. Now, WHAM is on the ground floor of HWL Europe, a hip agency in an ultra-hip neighbourhood that has become a creative hotspot in London. Vivienne Westwood's studio, Victoria Beckham's fashion home base, The Royal College of Art and the offices of venerable architect Norman Foster all surround Hutchison House. The go-karts and buses are long gone.

INSIDE HWL – THE IN-HOUSE SPECIALISTS

WHAM now works almost exclusively with HWL firms. They do have some external clients including Cancer Research UK

and SAB Miller, one of the world's largest brewers.

However, despite these top flight clients, WHAM made a conscious decision to re-orient its business on HWL a little over two years ago when Darren took over the running of the agency.

"For us, the huge opportunity is to work within such a diverse Group, while also continuing to work with some top quality long term clients," tells Darren. For HWL the work which began with Three was soon expanded to include other parts of the Group including A S Watson, Ports, Properties and a number of energy and utility companies.

Being perceived as an in-house branding company could potentially be seen as a drawback for attracting talented creatives who fear suppression of the creative drive and a lack of diversity. Not at WHAM.

"We are constantly surprised by how diverse and challenging the work is," says Darren.

The level of detail and creative expression can be vast, from creating brands, building websites, designing magazines, creating advertising campaigns through to designing furniture for retail outlets in Paris. They have done concept stores for





PUTTING THE WHAM IN HUTCHISON WHAMPOA



WATSONS

Watsons: Health. Beauty. Quality. Value. And - dated and tired. The brand needed to be clarified and re-defined to align with HWL's ambitions for growth and consistency across 12 markets.

Remaking a trusted brand is a tough challenge. WHAM had to maintain values that people trusted and deliver on modern aspirations. WHAM redefined the brand, bringing it closer to customers. New logo, new visual assets from corporate material to in-store navigation, graphics, photography, guidelines, CRM and digital applications.

In the end, WHAM achieved forward goals while connecting to the past. The customers stayed with Watsons for the rebrand. And goals for the future: achieved! As part of the Hutchison 'family', WHAM can continue to be there when Watsons needs them.



HUTCHISON PORT HOLDINGS (HPH) PORT OF FELIXSTOWE

The Port of Felixstowe was a venerable, fading port when Hutchison bought it out. Under HPH management, it became the number one container port in Britain.

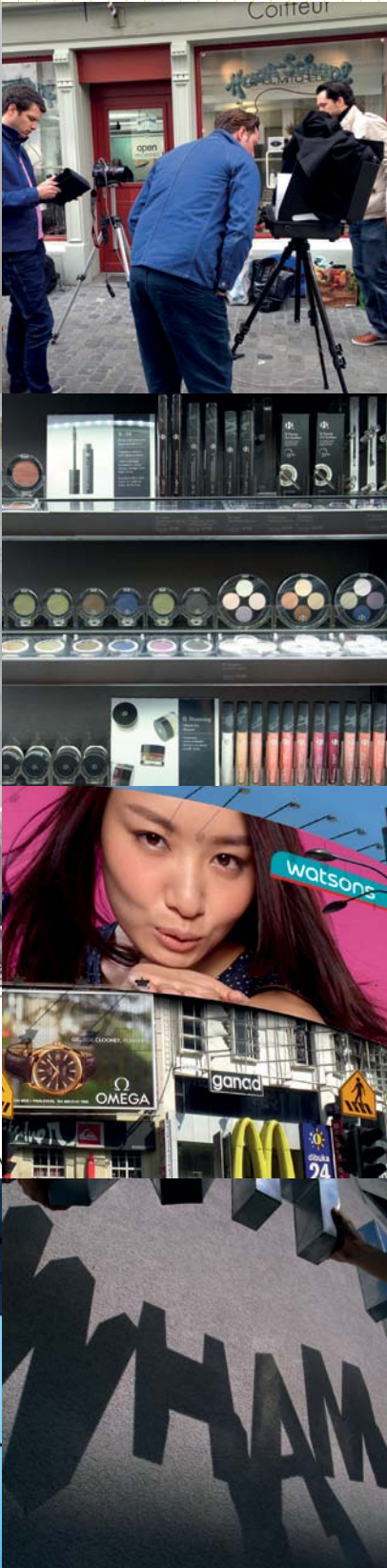
That position was not going to be retained by assuming the position was unassailable. Other global operators had their sights on the UK business and invested heavily in marketing, with Felixstowe in their sights. WHAM got to work.

WHAM undertook stakeholder research on Felixstowe's identity to understand its story. WHAM saw the opportunity for the Port to secure its leadership for years to come.

This insight became the "The Port of Britain" story. WHAM brought this to life across areas including website redesign, a film, and international roadshows.

The operational excellence of Felixstowe was married with its vision for the future for the Port, Britain and the industry. The industry reacted enthusiastically, bringing Felixstowe to the position of leadership it merited. WHAM continues to be an inside partner pushing Felixstowe's leadership forward.





a mature demographic in Malaysia, youth oriented retail in Romania and telecoms in Indonesia.

Working with HWL around the world, they have an internationally diverse workforce to ensure they hit all the right notes regardless of where they work. Chinese, Iranian, Taiwanese, Indian, Portuguese, French, Australian, Kiwi and, of course, Brits, are all part of the team. And they travel. Extensively. On any given day of the week WHAMmers are on the road; in Hong Kong, China or some part of Asia or Europe.

CREATIVES MEET CORPORATES - WHAM IN THE HWL GROUP

Hutchison Whampoa's many firms are often technical, industrial, and utilitarian – not the natural home of creative types. Darren was asked about how they 'fit in'.

“A lot of people are surprised to know there is a creative group inside Hutchison.” Darren stressed that the reason WHAM works well with the Group is that HWL is good at “understanding the value of brands” and how they contribute to the success of a business. And for those at WHAM, working ‘internally’ means that they are given a lot more access to information and issues facing each of the businesses they work with.

“At our best we work side by side with the senior management teams on strategic issues facing their businesses, and we then might work with all parts of a business and their agencies to implement those strategies,” says Darren. “As we are part of HWL and there for the long haul, we get to know businesses in a way no other agency can. There is deep trust, and that allows us to do a much better job.”

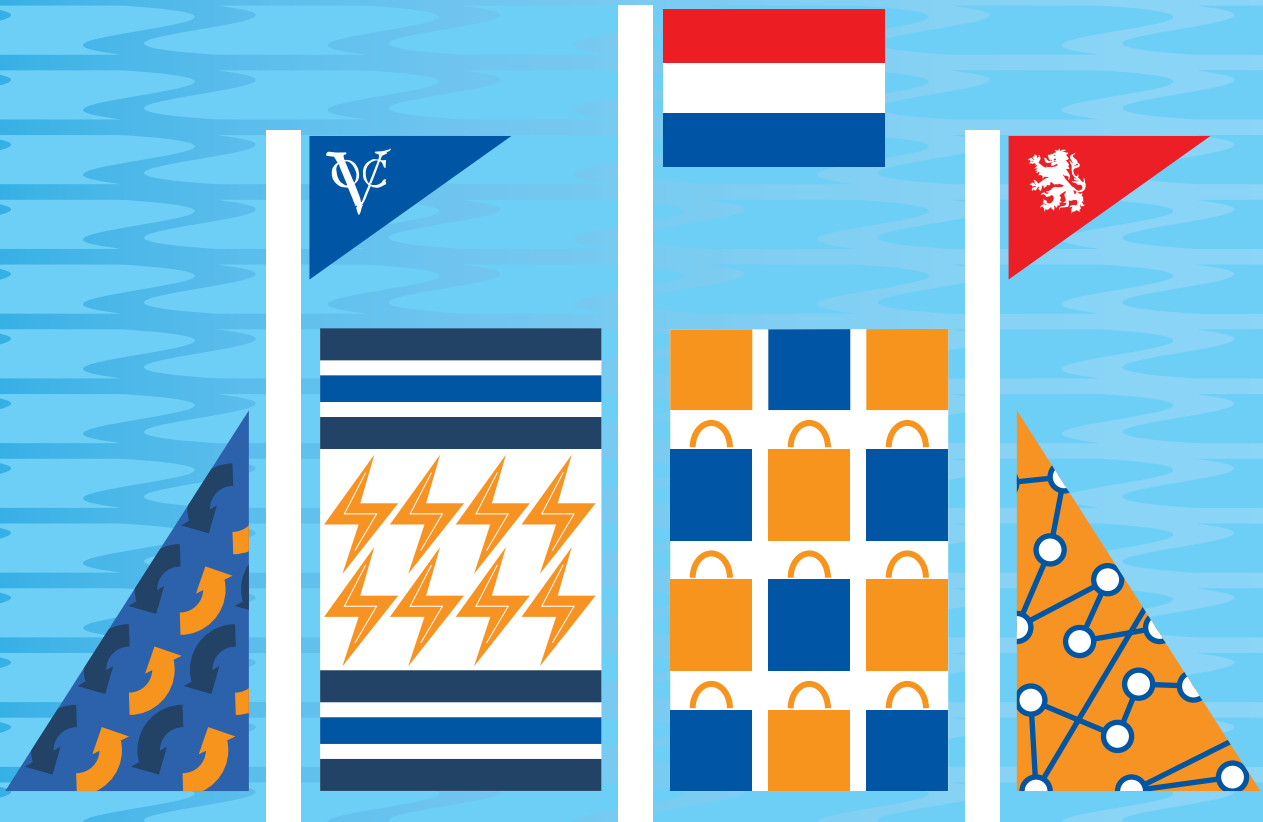
WHAM prides itself on the diversity of creative work and disciplines it covers. Fundamental to this is the diversity of people, experiences and skills in the team.

AND SO TO THE FUTURE...

While WHAM's primary offering is branding, the creative team led by effusive Executive Creative Director, Alex McReynolds, has successfully delivered a growing slate of services including films (for Ports), TV ads and advertising campaigns (Marionnaud Switzerland), new store concepts (Marionnaud, Watsons, Superdrug), communications (Three, Port of Felixstowe), digital (A S Watson, Three, INQ) as well as a major launch campaign and brand refresh for Watsons.

WHAM continues to build brands for firms within the Group and around the world. They have big plans for the future. As the business grows, *Sphere* expects them to keep putting the WHAM in WHAMpoa for years to come. □

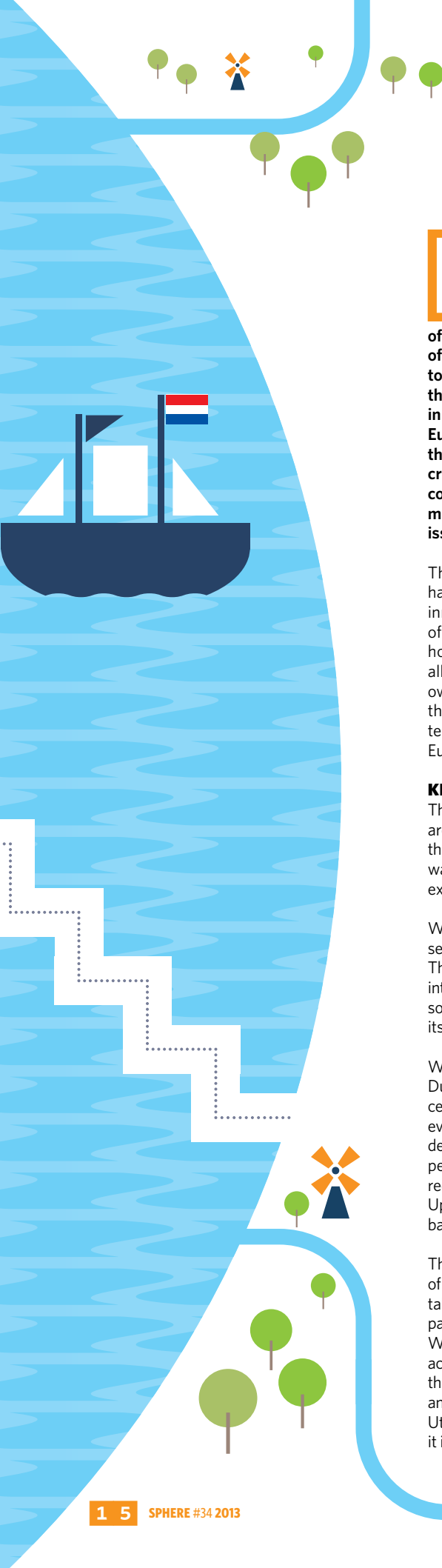
The reason WHAM works well with the Group is that HWL is good at “understanding the value of brands” and how they contribute to the success of a business.



INNOVATION

GOING DUTCH:

THE LOWER COUNTRIES AND HIGHER HWL ASPIRATIONS



It is hard to imagine how incredibly dominant the Dutch East India Company was for almost 200 years. Regardless of the small size of the Lower Countries, they were a nation of mighty traders and explorers, unafraid to sail into the unknown – and do business there. The firm, known by the initials VOC in its native Dutch, sent over a million Europeans to Asia to do business, more than all the rest of Europe combined. It created its own armies and armadas and is considered by many to be the first genuine multinational. It was the first company to issue stock.

The tradition of innovation and adventure has stuck with the Netherlands. The innovation has been historically demanded of a small country surrounded by often hostile neighbours and a more hostile sea, all ready to claim the country for their own. Yet the Netherlands has survived and thrived. They may soon dominate clean technologies as strongly as the VOC did Europe-Asia trade.

KEEPING IT GREEN AND CLEAN

The Netherlands has had a strong focus on areas of interest to HWL that have driven the Group’s investment there. Energy and waste management are two areas they have excelled in.

Waste management has traditionally been seen globally as a problem to be managed. The Dutch have turned the tables, making it into an asset. They have found cutting edge solutions that just might save the world from its addiction to garbage.

Waste management is a huge strength of the Dutch. Consider this: only three to four per cent of Dutch waste makes it into a landfill every year. Recycling of building waste and demolition stands at an astounding 99 per cent. A variety of disposal and waste reduction plans are in place to good effect. Up to 60 per cent of all materials are recycled back into new materials and into the economy.

The Dutch have become so good at disposing of their waste that they are even starting to take revenue from other countries which will pay them to take it. This is where Hutchison Whampoa comes in. The Group’s new acquisition, AVR Afvalverwerking, takes that garbage from the UK, Ireland, Belgium and from large Dutch cities like Rotterdam, Utrecht, The Hague to Rozenburg and turns it into energy for its clients. This firm has led

the Energy from Waste sector, discovering new ways to harness energy from receiving, separating, recycling and burning trash – all while meeting strict regulations to protect the environment.

ENERGISING NETHERLANDS

Energy is another Dutch forte. The small country dominates the renewable energy sector, in no small part due to single minded commitment and clear goals. Bioethanol and biodiesel, processed in Rotterdam, are foci. The Netherlands produces up to 10 per cent of all the European Union’s bioethanol and soon 25 per cent of its biodiesel.

Windmills are one area where the stereotypes do hold – the Dutch still do them well. They compete toe-to-toe with China for the global market. The undisputed leaders in windmill technology, they have a long history with them. Windmills hundreds of years old still function and serve today. They even play a role in holding back the sea, as part of the drainage system that keeps Lower (than sea level) Countries dry. The more modern windmills provide wind energy to electricity grids around the world.

CONNECTING EUROPE

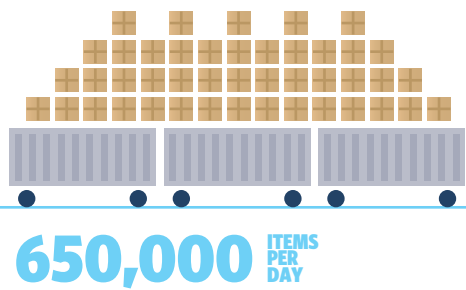
The Netherlands, at the heart of Europe, houses the port of Rotterdam and is home to HWL’s port operations and Europe’s busiest port. HWL’s own trading distribution centre in Heteren covers distribution to the entire Benelux region and part of Germany, supporting our three retail chains. The Dutch know how to organise a commercial venture and HWL has been the beneficiary.

Read on to discover where HWL has invested into the Netherlands. With over 20,000 of the global HWL total of nearly 260,000 staff members, the Dutch punch above their weight. Not only is HWL making profitable investments in the Netherlands, it is making strategic plays into core sectors like retail and ports, as well as into technology leaders with solutions that can be applied to the world over.

AVR, the newest acquisition, in particular has technologies and systems that could be applied to jurisdictions struggling with issues surrounding their waste disposal and energy import requirements. For over a millennia, the Dutch have kept ahead of their peers and performed well beyond what their numbers and circumstances would have suggested what was possible. HWL is proud to be a part of that continuing quest for excellence – Dutch style.



GOING DUTCH: THE LOWER COUNTRIES AND HIGHER HWL ASPIRATIONS



RETAIL

Dutch Shopping Style

The beauty of the Dutch countryside is legendary. The beauty of their people is even more so. The undisputed tallest people in the world, *Sphere* knows they get some help from HWL's beauty retail chains.

Two health and beauty companies and a luxury perfume and cosmetic chain comprise A S Watson's High Street presence in Lower Countries. While the business of beauty may be old, staying competitive means staying on top of the most modern business practices. The Dutch have a demanding eye for aesthetics and enjoy a highly competitive market. In the Netherlands, that means the most modern use of distribution, social media and CSR.

MOVING THE GOODS

The businesses are extensive, supported by the largest, most modern and most efficient health and beauty distribution centre in the Benelux (Belgium, Netherlands and Luxembourg). The distribution centre is over 68,000 square metres and located in Heteren in the Netherlands. It distributes an average of 650,000 items every day for more than 1,150 retail stores.

The distribution centre is highly mechanical and automated. Products are picked, transferred and packaged swiftly. The advanced semi-automatic systems will deal with medium-sized and small products separately; larger products are handled manually. The centre is also quite unique in a way that it adopts a dynamic system which allows a greater storage density than a normal distribution centre. On top of having separate picking systems to enhance efficiency, there are systems to support backwards integration. For example, the systems will automatically pre-order replacement stock when an item is running low.

But these systems do not just deal with products in the real world. Modern shopping sees consumers gathering information, evaluating options and executing sales in the online and physical world. To get to the top, HWL's retail units have needed to become masters of the virtual world, grasping every possible opportunity online.

CONNECTING ONLINE

Online marketing is crucial to attract and create loyal customers. Social media is a key element of online marketing. In the Netherlands, around half of the population has Facebook accounts – over 7.6 million users. Kruidvat and ICI PARIS XL have both successfully developed their social media channels to retain their existing customers and promote themselves.

A native Dutch company founded in 1975, Kruidvat expanded its businesses to Belgium creating an empire of over 1,000 stores. It was acquired by A S Watson Group in 2002 and is the biggest drug store offering health and beauty products in the Netherlands. Its long-standing success hasn't stopped it from innovating to master the world of social media marketing.

The Kruidvat Facebook fan page's membership exceeds 125,000 in its home country. These fans provide tips to the company, seek exclusive offers and raise queries online. Kruidvat staff update its Facebook pages daily and offer timely response and proactive solutions to customers. The company makes good use of blogs, forum conversations and other social media channels like Twitter. It once launched a "1 + 1 Free Makeup" promotion on its Twitter site and generated 2,000 tweets a day. While the firm has been recognised within the Group (winning the 2013 ASW Marketing & PR Awards), the real benefits have come in knowing the market and creating real, personal relationships with clients. Rather than a one way sales relationship, the

whole of Kruidvat is engaged with its customer base – its neighbours and countrymen – in a meaningful and ongoing dialogue.

Loyalty is a key element of growing a consumer business. Its loyalty card has been a smash success to enable targeted deals since its introduction in March 2011, with market penetration at 70 per cent of Dutch households. In November, Kruidvat reached the milestone of more than 3 million registered loyalty card members.

ICI PARIS XL was founded in the 1960s in Belgium and operates over 260 stores in the Benelux and Germany. The Dutch have taken to it, selecting it as the Best Perfumery Chain in their country for 10 consecutive years. This year ICI PARIS XL was chosen as the most favoured retail chain in the Netherlands. It has also had to get social media savvy to stay on top.

It has partnered with global beauty brand Guerlain and launched a Facebook campaign to gain more exposure. Participants in the campaign had to upload photos of themselves and take part in voting for a chance to win a trip to Paris. The campaign was a big success and engaged over 10,000 fans.

WE CARE FOR FAMILIES

Baby care is a tough market where the birth rate is low: only 11 babies born per 1,000 population. Kruidvat is tackling the challenge with extra efforts to target parents. The company runs the Nine Months Fair in Amsterdam every year as an event to connect with new parents. It targets parents-to-be and offers inspiration on baby and child care. Successful in-house brands promote confidence, including Kruidvat's own brand of diapers, selected as the best diaper in the market by Dutch TV critics show *Vara Kassa*. Kruidvat baby food has also been rated as 'Best Buy' from the Consumers Organisation.



ONE IN FIVE BABIES IN THE NETHERLANDS WEARS A KRUIDVAT-BRANDED DIAPER

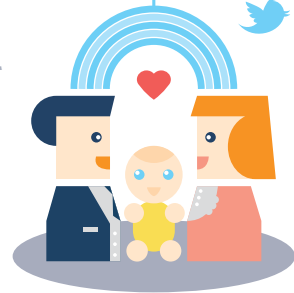


FIVE TIMES IN A ROW, KRUIDVAT IS VOTED TO BE IN THE TOP 3 MOST ESSENTIAL BRANDS IN THE NETHERLANDS

KRUIDVAT IS THE LARGEST PARACETAMOL (PAINKILLER) SELLER IN THE NETHERLANDS



70% OVER 70% OF ALL FAMILIES IN THE NETHERLANDS ARE CUSTOMERS AT KRUIDVAT



PORTS

Big, Green, Clean and Lean

CSR: CARING SELLS RETAIL

Modern corporate image building encompasses more than just an online presence. Effective deployment of Corporate Social Responsibility campaigns is essential for modern brands seeking to connect with consumers.

Trepleister is a drugstore bringing health and beauty to customers. It was acquired by A S Watson Group in 1997 and has over 130 stores in the Netherlands. This year, the company donated the funds collected from selling special plush toys, booster merchandise and used mobile phones to Stichting Opkikker, a foundation helping chronically ill children and their families. Apart from donations, Trepleister staff volunteer in outings organised by the foundation.

Kruidvat also plays a role in charitable contribution. It works closely with the Dutch Cancer Society and raised a total of EUR40,000 (USD53,537) for the Society in 2011 by placing collection tins in stores. Those with membership points on their loyalty cards can convert them into charity-directed cash. In an effort to arouse public interest in charitable participation, volunteers who are most recognised in the public and receive most votes will be rewarded by Kruidvat with a one-minute free shopping spree at the opening of a new store. People compete to do good in their community.

These measures engage the Dutch public to connect personally with a firm that not only sells physical products, but reminds them that their shopping dollars are deployed to make the world a better place.

Whether it is state-of-the-art distribution, a strong command of social media marketing, or a genuine and effective CSR programme, HWL and A S Watson's retail operations in the Netherlands help them to deliver beautiful goods to a beautiful nation every day.

Open the world map and you will see the Netherlands is located at the centre of Northern European shipping. It sits at the Rhine-Meuse-Scheldt delta, controlling the important waterways to Germany and Central European hinterlands. Port businesses are natural given the strategic location of the country.

Rotterdam was once the busiest and largest port in the world, succeeded only less than a decade ago by Singapore and Shanghai but it is still heading its European counterparts in cargo and shipping tonnage. This Western city of the Netherlands gains the name of the "Gateway to Europe" and has continued to attract overseas investment.

Hutchison Port Holdings acquired Europe Container Terminals (ECT) in 2001. ECT operates three terminals in Rotterdam and handles more than 60 per cent of the containers in the Port of Rotterdam. ECT City Terminal and ECT Delta Terminal have been in operation since the 1960s and 1980s, respectively. The latest star is the Euromax Terminal Rotterdam. ECT handled an impressive 7.7 million TEUs last year and covers an immense 420 hectares of land.

HI-TECH GIANT

The picture of a sophisticated port with extensive use of Automatic Guided Vehicles (AGV) and robotic cranes fits both the ECT Delta Terminal and the Euromax Terminal Rotterdam.

Once a container ship arrives at the Euromax Terminal, the semi-automatic quay cranes will place the containers on AGV, which will transport the containers between the quay and the stack. Containers will be stacked

automatically and will later be put on the trucks by the automatic stacking crane and some remotely controlled assistance for the last few metres of the loading process.

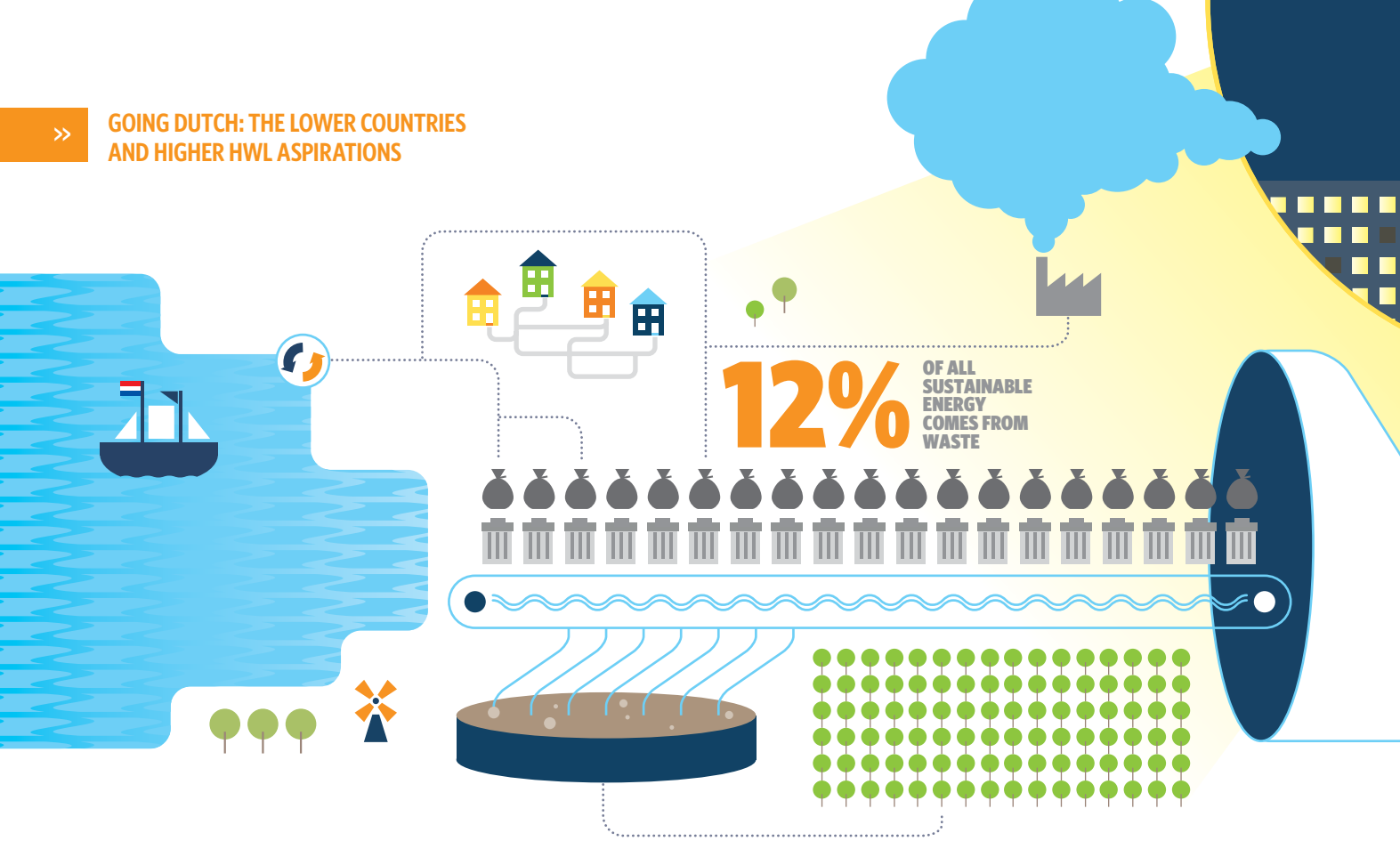
The whole design not only brings efficiency to a whole new level, it has made its green aspirations come true. The investment in highly qualified and motivated staff, automated processes and state-of-the-art electrified equipment, replacing older diesel machines, makes the operations more sustainable. ECT's efforts have not gone unnoticed.

AND A GREEN GIANT

If ECT is a logistics giant, it's a green one. People know it. Lean and Green is a programme run by Dutch organisation Connekt. Connekt is an industry and government partnership founded to promote GRI compliance in the logistics sector. GRI is the Global Reporting Initiative - a global movement to help corporations monitor their environmental performance and move towards a business more aligned with a sustainable future for mankind. Connekt recognises logistics firms that excel in this area, in particular through their awards programme.

ECT has won the **Lean and Green Award** in 2010 and the **Lean and Green Star** in 2013, meaning it has reduced carbon dioxide emissions by at least 20 per cent over a five-year period. ECT works harmoniously with the environment and is leading in this area among its peers.

The Dutch have a tremendous seafaring and trading tradition backed by the largest port in Europe. HWL, through ECT, is a big contributor to that success story and will be for years to come.



ENERGY

Garbage into Gold: AVR's Energy from Waste

The Dutch have a long history of defying the odds through hard work and clever solutions. They have always been merchants and innovators to make the unthinkable happen. The whole country is made possible by making parts of the sea fertile land. The scale of the engineering they have developed is unprecedented and enduring. In the modern Netherlands, that same drive to make “something” out of “nothing” has seen them turn garbage into gold.

The Dutch are the world leaders in taking waste and turning it into something valuable. They took the seafloor from the sea and made it into arable, habitable land. They have become so good at these transformations that they take rubbish from others to create energy.

The Group took notice. This is not their first venture in the waste-to-energy sector, but it is the biggest. After acquiring New Zealand waste management business EnviroWaste in early 2013, AVR has become the latest investment in Cheung Kong Group's portfolio in the Netherlands.

The deal is a joint purchase of USD1.2 billion by Cheung Kong Holdings, Cheung Kong Infrastructure, Power Assets and the Li Ka Shing Foundation, taking shares of 35 per cent, 35 per cent, 20 per cent and 10 per cent respectively. The full name of the firm is AVR Afvalverwerking B.V. Afvalverwerking means 'disposal', reflecting the company's roots. It now does so much more.

THE DUTCH PLAN

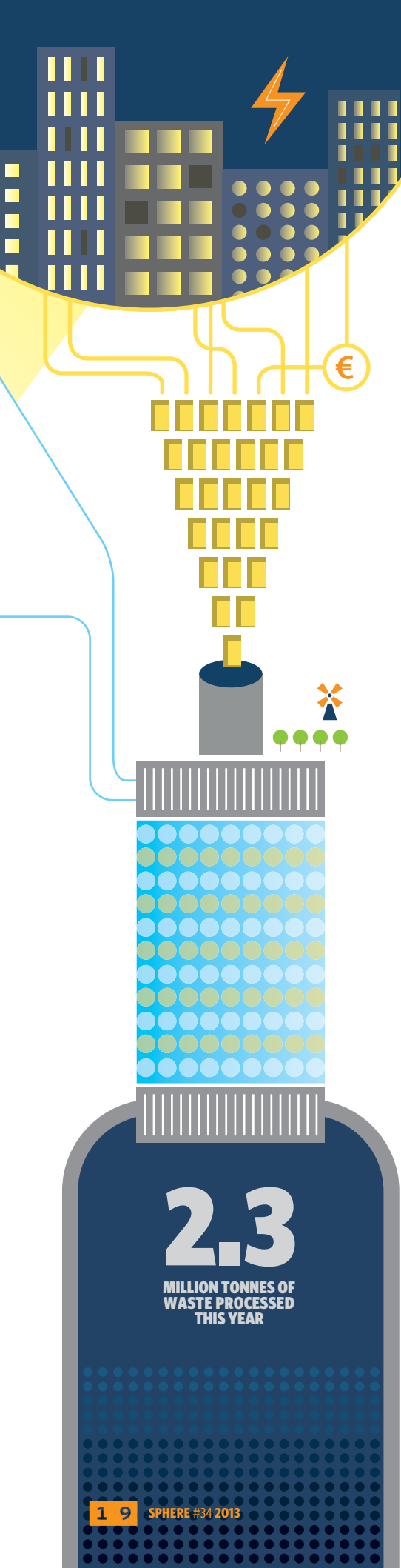
The Dutch are great planners. With a massive infrastructure responsible for the country's very existence through a network of dikes holding back the sea, they are experienced in taking a long-term view. Their energy policy is no different.

Recent Dutch energy policy demands their energy supply to be sustainable, reliable and affordable. The Netherlands aims to cut carbon dioxide emissions, from a 1990 baseline, by 80 to 95 per cent by 2050. Renewable energy is a vital part of the plan. Given waste must also be dealt with, the waste-to-energy development path is a natural one. They have embraced it with enthusiasm.

The Dutch waste-to-energy plants currently deliver almost 12 per cent of all sustainable energy in the country. These plants thermally treat residual household and similar waste that cannot be reused or recycled in an economic or environmentally beneficial way. They are cost-effective and reliable sources of energy in the form of electricity, district heating or cooling, and steam for industrial processes. The heat and electricity delivered to housing and industry replace fossil fuels used by conventional power plants. Waste-to-energy plants reduce carbon dioxide emissions and lower the need for landfill.

In the Dutch waste-to-energy industry, AVR is the biggest solution provider in the country. AVR, which practises traditional waste incineration, has developed an industrial Energy from Waste (EfW) platform through the implementation of innovative growth projects to produce an optimal mix of heat, steam and energy.

AVR generates its income from three sources: gate fees for processing waste; the sale of output generated from waste processing in the forms of electricity, steam, and district heating; and the sale of recovered materials.



In addition to being the biggest waste processor, AVR is expected to be a leading domestic renewable district heating producer by 2015.

VILLAGE BUSINESS

Gate fees is a fancy way of saying people pay to get rid of their trash. The majority of gate fees have been secured through long-term contracts from municipalities and commercial customers. Rozenburg and Duiven are the two locations of AVR's plants.

Rozenburg is a small village close to Rotterdam. It is actually on a former island, home to a mostly bedroom community, a Kuwaiti-owned refinery and AVR. Almost 50 per cent of AVR's domestic waste is delivered by water, to Rozenburg.

Duiven, a slightly bigger municipality, is due east, closer to the centre of Arnhem on the German border. Both the Rozenburg and Duiven plants are qualified energy efficient waste treatment plants. They are of "R1" status, entitling them to import waste from other member countries and states of the European Union. With Antwerp and Brussels in less than two hours' drive, Rozenburg and Duiven, sitting in the middle of a Dutch and German concentrated population, have no lack of waste being generated in a narrow catchment area.

Apart from serving the residents in the Netherlands, AVR also supports the UK, Ireland and Belgium by importing their waste to Dutch's highly efficient plants. This reduces landfill volumes across Europe and increase recycling and incineration volumes, producing renewable energy out of domestic and international waste. AVR can handle the incineration capacity - and more. The Rozenburg and Duiven plants together processed 2 million tonnes of Dutch waste this year and 300,000 tonnes of imported waste in 2012. This capacity means the company commands a 23 per cent market share of the waste processing industry in the Lower Countries and will soon measure its market share in terms of European output.

ALCHEMY: LEAD TO GOLD

The incineration of waste generates heat. The steam and district heating are sold via long-term contracts to local municipal district heating networks. Steam is supplied to neighbouring industrial users like Tronox, a titanium producer, and chemical producers EKC and AkzoNobel.

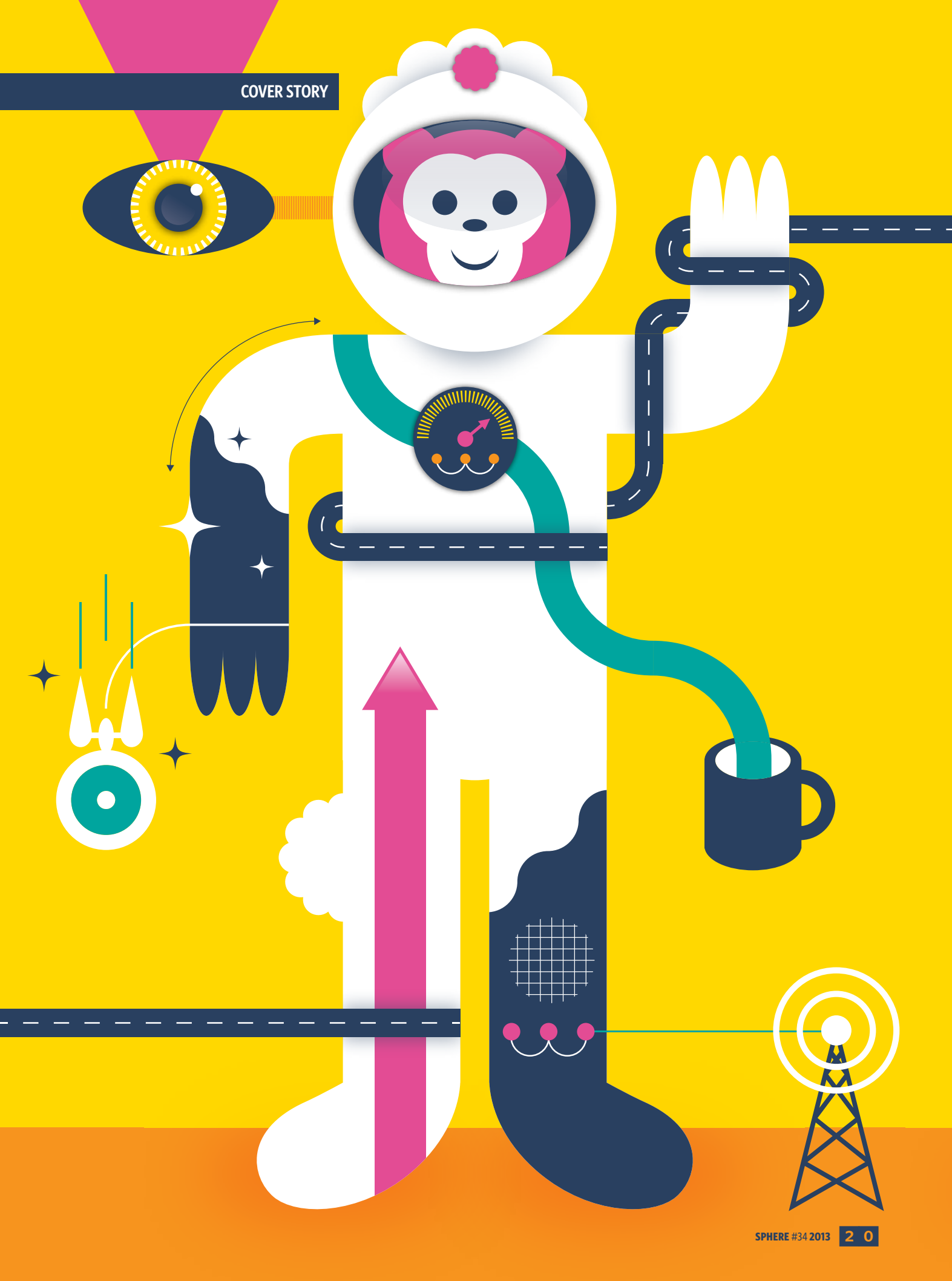
In developing a new approach to waste management, AVR has encountered and handled different challenges. They have had to develop energy solutions to supply heat and steam as well as the traditional "electricity only" solution in EfW installations. In developing processes, they faced challenges in getting partnerships in place to acquire the in-depth knowledge needed to operate a heat/steam network. This experience is valuable and could be transferred to other countries.

In the future, AVR has a plan to increase heat and steam sales to more municipalities and nearby industries and import waste from EU countries with high landfill volumes. With the completion of the energy projects in Rotterdam-Zuid (in 2014) and Rotterdam-Noord (in 2015), AVR Rozenburg will double its thermal output. In addition to being the biggest waste processor, AVR is expected to be a leading domestic renewable district heating producer by 2015.

REDUCE, REUSE AND ...RECYCLE!

Not all trash ends up in steam and energy. The sale of recycled materials is the third line of income for AVR. AVR takes an active role in bringing recycling and incineration together, which are usually portrayed in the public domain as contradictory waste management handling techniques. The waste material brought to AVR consists of just about everything, from fruit, vegetable and garden waste, plastic, waste wood and paper pulp to refuse bags full of domestic waste and wastewater from the production process of local businesses. Everything valuable to recycle, such as metals, is sold on to industry.

HWL is contributing to cleaning up the planet and AVR is a part of its global investment strategy. As noted, this isn't the first acquisition in this sector and AVR's technology may have application elsewhere. Many markets HWL operates in are struggling with waste disposal and clean energy generation. For those that cannot ship their waste to Rozenburg and Duiven directly, AVR's technology and experience could make all the difference. □



MANAGEMENT

CONTROL ROOM

HWL companies manage huge projects with billions of moving parts. At the centre of it all: The Control Room. Who - or what - are the brains that ensure that the grand dance of power, ships, and waste flow to the places they are needed?



Man's advance to civilisation came through his command of fire, farming and the wheel. But to urbanise and develop the real hallmarks of civilisation – learning, commerce, laws, courts and systems – he needed infrastructure. Road networks, not trails. Aqueducts, not rivers. Energy delivery and waste disposal, not hot sun and latrines. With modern infrastructure in all its glorious complexity, man needed better systems, interlocking systems, systems with safeguards. For civilisation to grow and for man to advance, he needed The Control Room.

The Control Room has its own special place in fiction – and dramatic fact. From Tom Cruise's *Minority Report* to the bridge of the *USS Enterprise* in *Star Trek*, the control rooms of science fiction have been scenes of high suspense. Very real control room dramas have been brought to life in films like *Apollo 13*, where NASA scientists tried to save astronauts suffering equipment failure in the cold and dark of space.

HWL engineers manage hugely complex real life systems. They are no drama queens. They manage the infrastructure of the modern world moving goods, water, energy, and even our garbage, around cities, nations, and continents without a hitch day after day.

Here we examine HWL Control Rooms around the world. This small sampling showcases some of the range of operations and what is commanded from the centre. Hutchison Ports Holdings (HPH), as one of the world's largest port operators, no doubt has an eye-catching number of port related control centres.

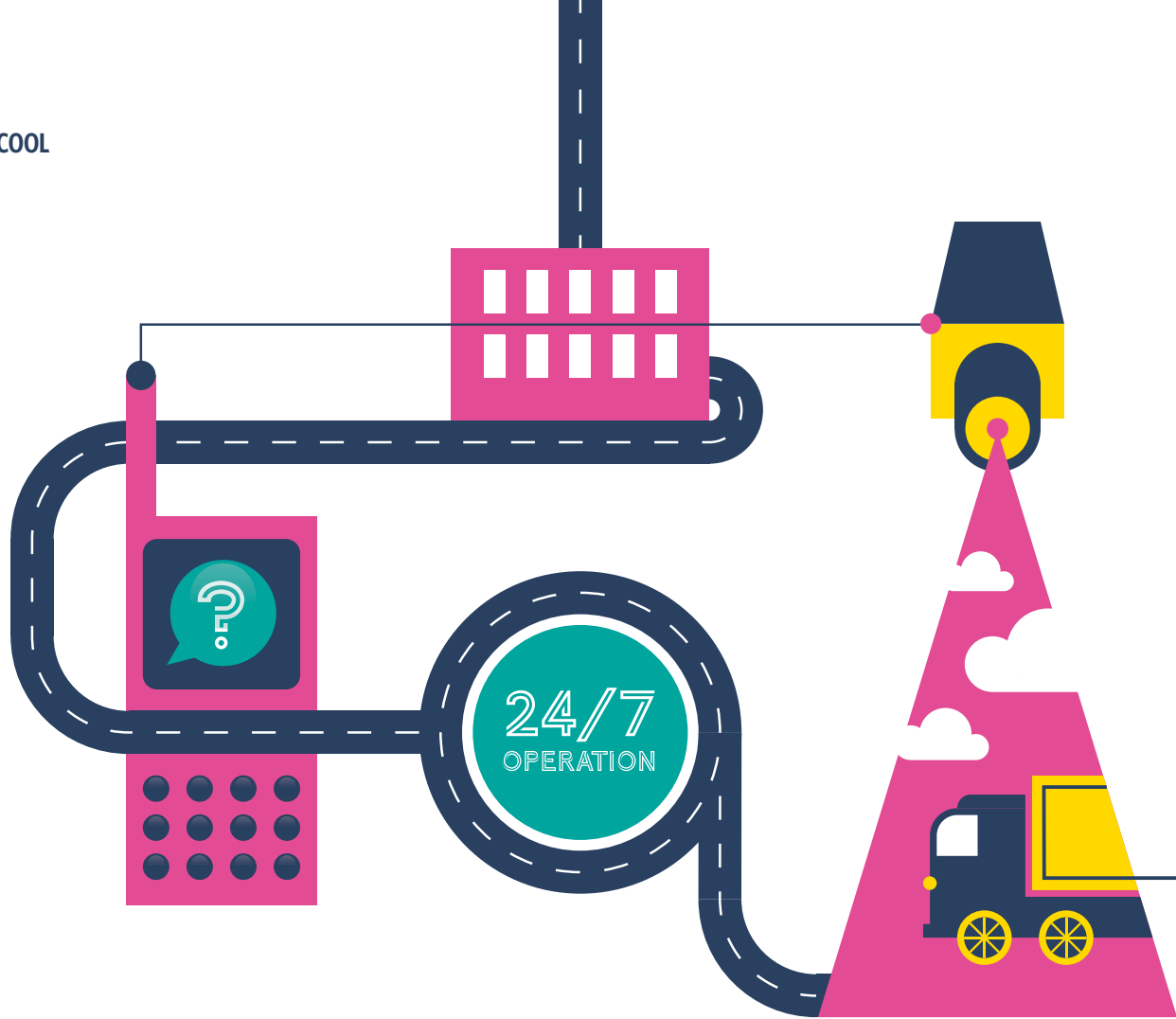
Energy is one of the pillars of modernity. Hongkong Electric's (HK Electric) performance standards are the most demanding in the "world's most vertical city". A small group of elite individuals ensure the lights stay on and the lifts always rise in the city that never sleeps.

Without water, we could not survive. Northumbrian Water makes sure 700 million litres of water a day arrives in the right places in the UK, and leaves them again safely. They closely monitor water flow and quality 24/7 to ensure against flooding, water loss and even contamination that can lead to fatal loss of life.

Control rooms can even watch over alchemy as lead is turned into gold. Or in the case of AVR, from waste into valuable energy.

All these control rooms deploy state-of-the-art technology in the hands of well trained, dedicated staff who guard against disaster every day around the world. Turn the page and step into... The Control Room.





Hongkong International Terminals

THE HIT CONTROL TOWER - TRADITION AND TECHNOLOGY

This Control Room is not like other ones. Most control rooms evoke the science fiction of today or the more antiquated perception of a 1960's vision of the future. But not this Control Room. Its next generation award-winning proprietary terminal management software is artfully concealed in a veneer of the past.

Walking into the Hongkong International Terminals' (HIT) control room that oversees 11 million plus TEU movements a year is like walking into a posh seaside restaurant. Polished oak with hints of brass evoke a maritime history. All that's missing is a ship's wheel and ropes on the wall for decoration. The atmosphere is intent, but not tense; quiet, but not sombre. Franco Ning, Assistant General Manager - Operations, was *Sphere's* guide into one of the world's busiest container terminal control rooms.

CHANGING OF THE GUARD

The maritime industry is often characterised as being populated by hoary old men of

the sea. This Control Room did not reveal that. There were some lifers, including Mr Yip Wing-tat (Duty Officer, Control and Planning) who has been with HIT for 30 years, and he shared his wisdom with us. Franco himself has been with HIT for over 20 years. They did not look it - must be something in the seaside air that keeps them youthful. But the rest of the staff looked young. Intense, purposeful - and young.

Franco explained that there was a time when most of the people who came in had worked on ships or perhaps with the agents who render port services. On-the-job training or vocational, more practical education, was the norm. Back in the old days, they were experts in planning the 'movements' - deciding which ship came in where, what cranes and trucks needed to be deployed and how containers were stacked on board ships. They mastered the quickly changing technology needed to stay competitive in a fast moving business.

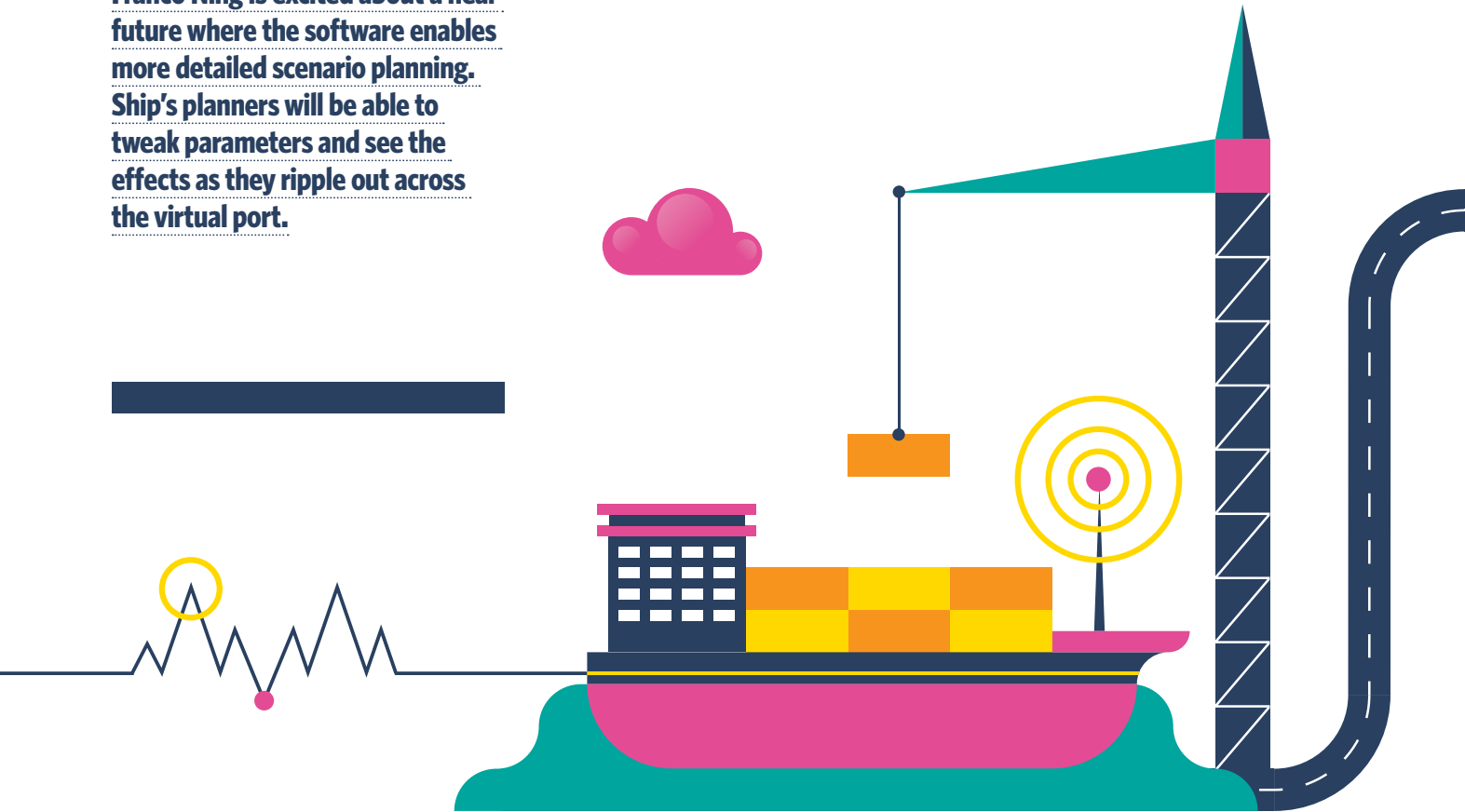
Now, things are different. Many new trainees in the Control Room are from Hong Kong

Polytechnic University, encouraged by their professors to be there. One young lady that *Sphere* met, Janet Wong, had studied Industrial Engineering and Logistics Management. Her professor had encouraged her to take a post with HIT - "My teacher loves HIT!" - and had promoted the firm heavily as an employer of choice. She has mastered the skills of a ship planner and is in a trainee phase to go back out to the front lines where the action is, radio in hand.

TECHNOLOGY DRIVEN

She will need to work with the seamless technology platform run by the proprietary terminal operating system nGen (next Generation). This modular, scalable system has been adopted in whole or in part by various new and acquired ports in the HPH network around the world. It has won awards from institutions as venerable as the Smithsonian Institute - and is never released to outside firms. "It is our competitive edge!" exclaimed Jeannie Chiu, Manager, Group Corporate Affairs, during a tour of the operations, aghast at the idea that anyone else could possibly have their hands on it.

Franco Ning is excited about a near future where the software enables more detailed scenario planning. Ship's planners will be able to tweak parameters and see the effects as they ripple out across the virtual port.



Cranes, trucks, tractors (external trucks coming into the yard with deliveries), even CCTV cameras are all online to monitor operations in the yard and are controlled from the control room.

THE FLOW OF INFO

The nGen system does have some knowledge of what happens in the world outside the terminal. Ships, as soon as they leave port, will send an EDI (Electronic Data Interchange) that goes into the nGen system with details about its cargo, and what cargo needs to go where. Agents may amend those instructions while the ship is in motion, but the Control Room has some idea of what is coming and can start planning. That notice can be weeks ahead of a ship's arrival if coming from Europe or as little as six to eight hours if coming from Yantian Port, just up the river.

Once the EDI arrives, it files automatically into nGen which sends it to 'Guider', the ship planning part of the software. Algorithms do their thing and prepare a Smart Plan – an initial guide as to where to send the boat

and how to unload it based on the EDI instructions. The plan will land in the hands of a real person – a ship planner, who will adjust it based on their experience. That person will then be responsible for ensuring that the final plan works.

The OMS – Operational Monitoring System – is the software that tracks every element in the yard. It knows where the trucks, cranes, containers, river barges, and sea-going vessels are. The ship planners work on one ship at a time, ensuring a smooth execution of the plan and happy customers.

The planners then check final loading with a ship's captain – sometimes at the behest of Guider, which will flag any loading issues related to container weights and stacking patterns.

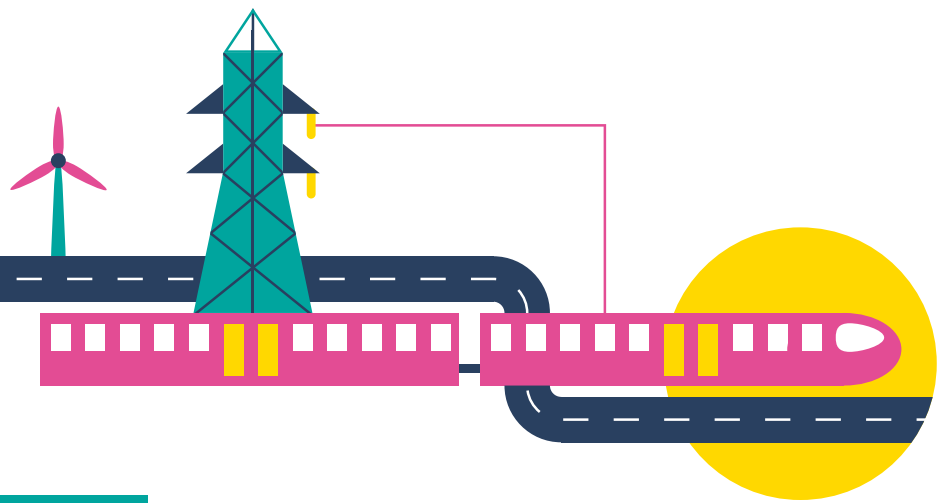
THE FUTURE

Franco Ning is excited about a near future where the software enables more detailed scenario planning. Ship's planners will be able to tweak parameters and see the effects as they ripple out across the virtual port.

This will allow them to make better use of resources and improve their already world class KPI results in stay-at-port times, tractor turnaround times and more. Technology will increasingly be used in operations to enhance efficiency and maximise resources.

New technologies have also been deployed to make the port increasingly environmentally friendly. Many of the previously purely diesel cranes have been replaced by hybrid and purely electric cranes. Franco said that this has had a visible improvement on the air quality in the ports, reducing diesel emissions at ground level. Still, he can see near and far future technologies transforming the work of the control room and terminal.

The HIT control room respects its maritime history both in its appearance and in its traditional values of commitment and hard work. With a nod to the past and an eye on the future, the Mr Nings, Mr Yips and the young Ms Wongs of the HIT control room will keep the containers flowing well into the 21st century.



Hongkong Electric

IN THE BEGINNING...

HK Electric started operation on 1 December 1890 at 6 pm and lit up Hong Kong's first electric street lights in the Central Business District.

BACK IN THE DAY...

Before 1969, there was no system control centre in HK Electric. In the old days, the telephone operators working in the Transmission and Distribution Division were responsible for taking down reports from customers regarding supply interruptions and then passed them to the duty area engineers for action.

In 1969, a System Control Desk was attached to the North Point Power Station Control Room. Two years later, system control engineers officially took over the responsibility to monitor and control of the transmission and generation system. But it was only in 1974 that the first System Control Centre was established on Kennedy Road. After over 11 years' of service, this centre was replaced by a more advanced and well-equipped one in the Apleichau Operational Headquarters in 1985. The existing System Control Centre, the third generation in the series, was officially opened in July 1999 to take over the control and monitoring work of the entire HK Electric electricity supply system, including the generation, transmission and distribution of power.

AND IN THE MODERN DAY...

Since 1990, electricity generation has been entirely carried out at Lamma Power Station. The Lamma Power Station and Lamma Power Station Extension have a total installed capacity of 3,737MW with eight coal-fired units, five gas turbine units, one wind turbine, one solar power system and two combined cycle units.

The System Control Centre reached a new milestone in July 1999 when it was moved to

the Electric Tower and at the same time had its new Energy Management System (EMS) and Distribution Management System (DMS) commissioned to replace the old System Control Centre in Apleichau Operational Headquarters. The design of the new centre takes into account operational needs and places special attention on human factors.

The new EMS and DMS employ a Siemens EMPOWER Spectrum system with a distributed open system architecture. The EMPOWER Spectrum uses state-of-the-art technology and is characterised by easy upgradability and extensibility. Both the EMS and DMS are built with full redundancy for all hardware including LAN to ensure that no function is lost due to a single point of failure. In addition to the normal supervisory control and data acquisition (SCADA) functions, the systems also come with special SCADA functions, advanced applications and links to other systems such that automatic control functions, timely, relevant and accurate information plus analytical tools are available to System Control Engineers for effective control and operation of the HK Electric power system as well as prediction and management of contingencies.

The principal functions of the system control room are to monitor and control the company's power system, to handle power system emergencies, as well as to provide information to the Customer Emergency Services Centre for answering customer enquiries. In the control room, it contains EMS consoles, DMS consoles and an operator training simulator. One assumes that it would take an army to coordinate this operation.

One would assume wrong.

SO MANY RELY ON SO FEW

In order to get the full picture, *Sphere* reached out to the head of the control room - Mr CS

Leung. To join the nerve centre of HK Electric, Mr Leung explained that the personnel have to be good at making decisions and handling stress, as there are always timely decisions to be made. Mr Leung let us in on a surprise: this nerve centre runs round-the-clock in three shifts with only three or four System Control Engineers in each shift. While this may seem normal for smaller operations, this is the electricity supply for over 1.2 million people in the world's most vertical city. Millions of escalators, lifts, major train systems, traffic, water pumps, air conditioning and much, much more - all being watched over by three to four engineers.

The whole room controls and monitors all generation units in the power station, tens of switching/zone substations and more than 3,000 distribution substations. The engineers also coordinate responses to all equipment outages in the generation, transmission and distribution systems. In order to improve the supply reliability, the Distribution Fault Isolation Expert System (DFIES) has been developed which can identify and analyse the faults in the 11kV system within 15 seconds. The DFIES not only identifies problems such as sections of faulty cable, but also makes recommendations for actions to be taken by expertly trained System Control Engineers. Contingency plans are prepared and laid out and studied by the engineers. As a result, supply restoration for unplanned outages in 11kV system are normally completed within one to five minutes.

About 1.2 million people residing on Hong Kong Island, plus millions more who go to work, dine and shop there every day, rely on this skeleton crew to see, move and survive. It is unlikely that, throughout history, so many have unknowingly depended so much on so few and is a testament to the organisational power that has, as its focal point, the Control Room.



A combination of systems and world class technology means that problems are identified and analysed within 15 seconds of an incident...

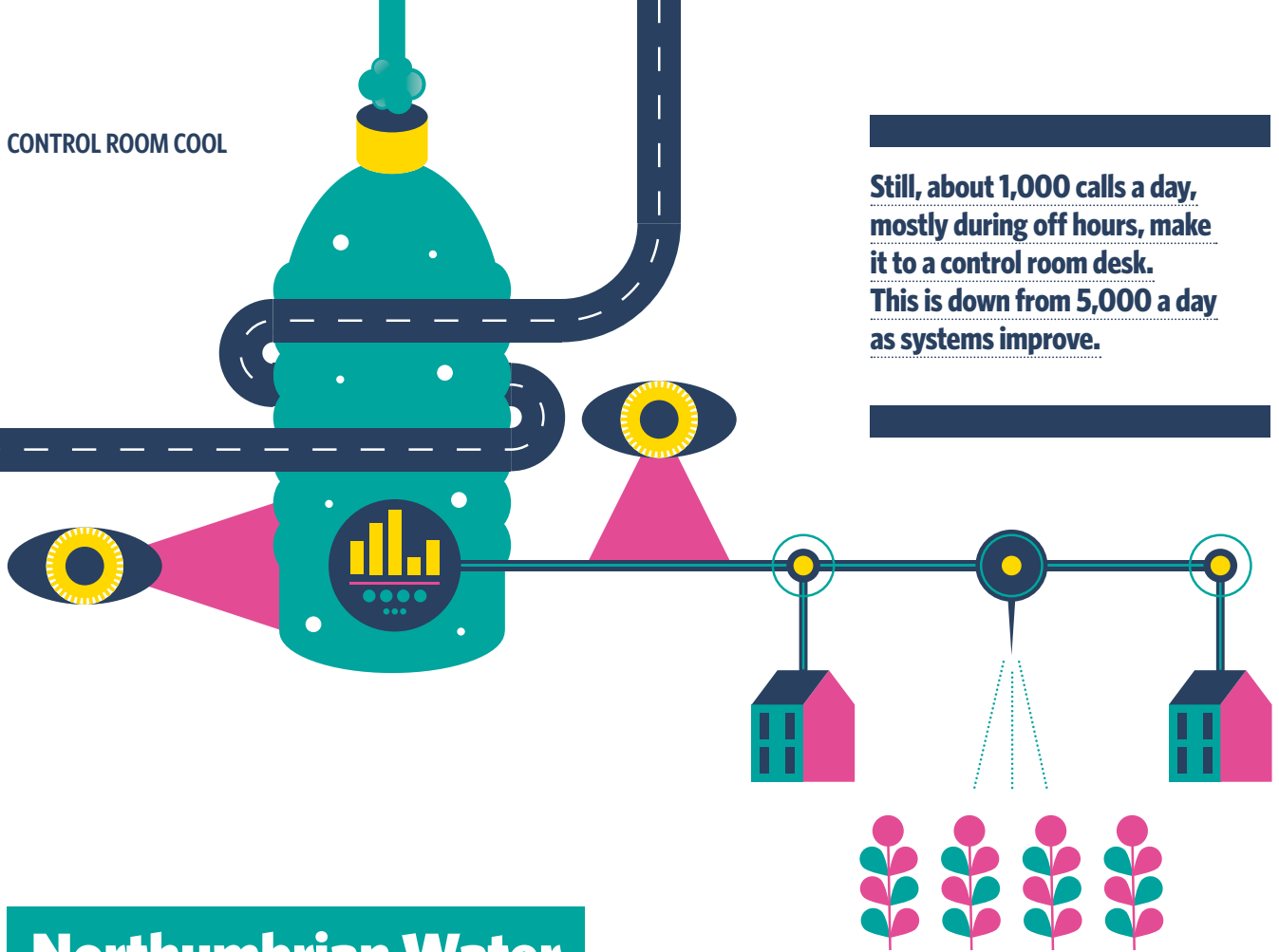
1.2M people residing on Hong Kong Island... rely on this skeleton crew to see, move and survive.



HK Electric's power plant on Lamma Island.



CONTROL ROOM COOL



Still, about 1,000 calls a day, mostly during off hours, make it to a control room desk. This is down from 5,000 a day as systems improve.

Northumbrian Water

THE STUFF OF LIFE

There are the daily conveniences of life, and those things that make modern life possible. But when it comes to a true must-have, water is the stuff of life. At Northumbrian Water, they move 700 million litres of it a day to residential and industrial clients. And it has to be perfect.

Rob Elrington, Operations Manager in Water Production, spoke to *Sphere* and explained, "Quality is key. It's an extra dimension of the work we have. If gas or electricity comes through a bit iffy, it's one thing. But water has to be clean enough to drink." This 28-year veteran of the firm shed some light on the mysteries of the Control Room.

CONTROL CONTROL CONTROL

"You're better to be in control, than out of control."

This sums up the philosophy behind the Northumbrian Water control room operators. Two people watch over a system that controls over 3,000 sites – major water and waste water control facilities – and more than 53,000 points (pieces of information) are measured. Their job is to see problems before they happen, making adjustments before it becomes a problem to customers. With a system this big, you can't watch for

problems and solve them at the same time – so the team is split into parts.

Northumbrian Water had its origins in many smaller companies that were consolidated over time. As a consequence, the firm had multiple control rooms controlling smaller areas. But now, one control room controls the whole vast system. While the 24/7 controllers deal with the worst problems, coded as P1 or P2 alarms, most problems are automatically routed to field operators who can move to a trouble spot and fix problems independently; these are coded P3 or P4 alarms.

P1 and P2 alarms cover potential disruptions in service, such as flooding or a major pipe break – although these happen very rarely. P3 and P4 alarms are the ones which do not require such immediate attention.

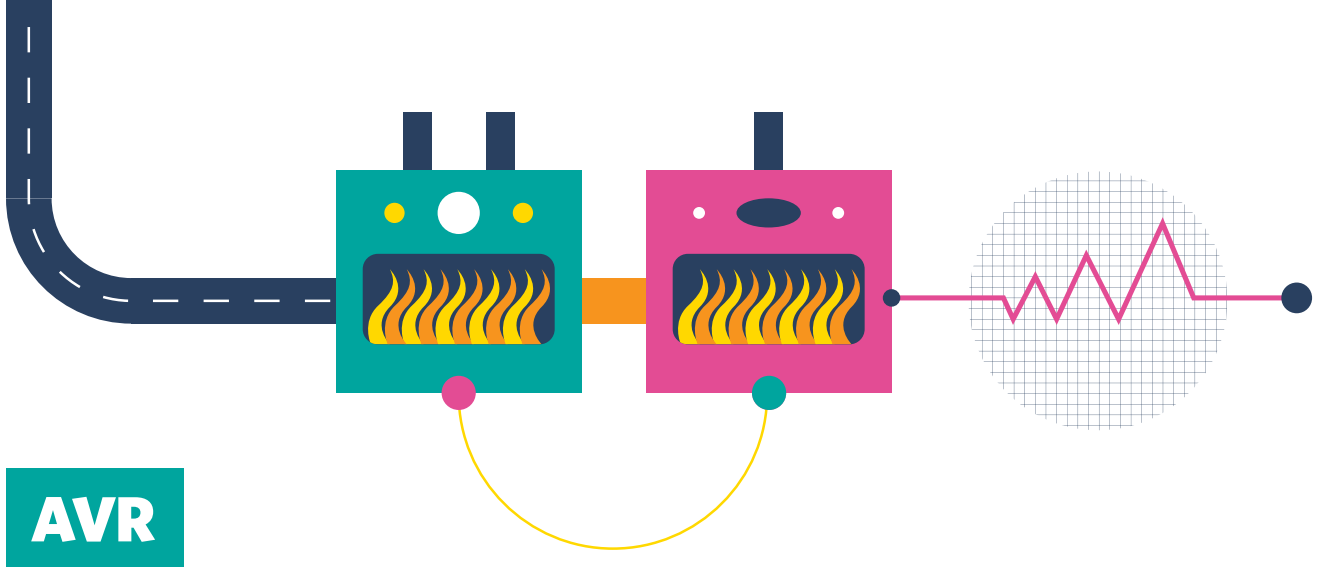
The control room is supported by standby teams who can be called on out of normal hours to assist in dealing with major problems. Just because there is a problem in one area does not mean the other 53,000 points of information can be neglected. This division of labour between network controllers, field specialists and problem solvers makes sure that the incidents are manageable. In the words of Mr Elrington,

"operators don't want to become lost in a sea of alarms". Given such a vast system, even a small percentage of minor issues would overflow a control room without robust systems in place.

Still, about 1,000 alarms a day, mostly out of office hours, make it to a control room desk. This is down from 5,000 a day as systems improve. The controllers must be well trained and ready for anything. They use one of the old control rooms from previous water companies as back-up. Rob Elrington remembers on one occasion there was a problem with their power supply and they had to instantly decamp to their back-up site over 35 miles away – and did so without a hitch.

Controllers do not have to be university trained, but are trained by Northumbrian Water. Controllers can come from operations teams within the company or from other control room environments.

The old saw about how it all flows downhill makes water distribution seem an easy game. But the complex systems, detailed alarm protocols and the lifetime commitment of the people at Northumbrian Water belie the truth: huge effort and intelligence goes into making sure they can stay in control. That is why they call it, after all, The Control Room.



AVR

GARBAGE IN, ENERGY OUT

AVR is the Group's largest EfW – Energy from Waste – operation. A three-in-one operation, they must monitor the inflow of garbage, control and burn waste and then connect to the energy grid. The product is combustible and safety concerns are paramount.

Mr Joost van Rooijen, a 15-year AVR veteran who has risen from operator to head of the production department, gave *Sphere* some insights into what happens in AVR's control room.

ONE ROOM TO RULE THEM ALL...

According to Mr Rooijen, the complete waste energy and biomass plant is controlled from one single control room. There are no fewer than five different systems controlled from the one Control Room:

- 7 Energy from Waste (EfW) boilers including flue gas treatment and cogeneration power plant (electric and heat production),
- 4 vortex ovens for waste water incineration,
- 1 Biomass plant including flue gas treatment and steam turbine, the BEC (Biomass Energy Plant) produces carbon dioxide neutral electrical energy,
- Utility systems as cooling water and instrument air for all sites, and
- Fire fighting systems.

The boilers produce the steam by the incineration of the combustible waste, while the vortex ovens burn waste water. The resulting heat is fed into AVR's heating grid.

Vortex ovens aren't named for the shape of the oven, but rather the shape of the rotating flame. This gives the best flammable mix of waste water and auxiliary fuels, removing contaminants.

The BEC (Biomassa Energie Centrale, "Biomass Energy Plant" in English), produces 100 per cent green energy, by burning waste wood. The steam produced drives a turbine, generating electricity.

The utility systems and fire fighting systems must be maintained in top condition in the unlikely event of a fire or other disasters. Control Room operators have to know where a problem is long before it becomes a problem.

SEEING PROBLEMS BEFORE THEY HAPPEN

AVR not only draws power from the grid for their operations – it feeds power into the grid. Accordingly, it must have backups of backups to ensure integrity across the system. AVR has back-up panels of electrical rooms in the plant from which the staff can control most important parts of the operations. Other backup systems, like emergency generators, are on standby in case of power drops. The control system itself is completely equipped with its own electrical back-up system.

Moreover, AVR has an "island mode" system in which they can generate and provide their own electrical supply in case there is an issue in the external power grid.

The human element is crucial and AVR's efforts in emergency response aren't purely restricted to Control Room personnel. Crisis teams manage fires, technical failures (such as with a valve or pump), injuries or other incidents. Mr Rooijen said, "We do emergency drills in collaboration with local emergency services such as fire department and police."

THE CONTROL ROOM PROFESSIONALS

Who is qualified to work in this important control room? Mr Rooijen described the people who work in the control room as skilled operators with a minimum of four years' experience on site. Most of them are trained in thermodynamic physics. Many have backgrounds in power and transportation. The operators in the control room need to be stress resistant and have good communication skills.

"When I was an operator I was tested by a Belbin (personality) test. For other jobs I had assessments on personal skills. In some cases people get personal coaching to improve

necessary skills," said Mr Rooijen. In AVR, the internal training of an operator takes up to two years, including making a set of reports on various plant parts, culminating in an examination. Every five years all operators are tested on their knowledge and skill levels. Every year the operators get an appraisal which is used by employer and employee to improve personal performance. Cases that need more than average attention receive a mid-term appraisal once every quarter.

MOVING TARGETS

When being asked about the most challenging part of his job, Mr Rooijen explained that keeping the carbon monoxide level under the national limits is the most difficult part. Since the AVR fuel is from waste and waste changes day to day, as well as having seasonal trends, it is an unstable factor. Practices must be monitored, managed and adapted to continue to meet national standards.

The variable nature of inputs also impacts the mechanical workings of the operations. The Control Room has to spot when bottlenecks or impending problems are about to impact the processes. "The plant consists of many mechanical parts which require a lot of attention. Obstructions on conveyors and funnels are also common in this business," said Mr Rooijen.

A nimble and well trained staff is needed to deal with unseen contingencies. Rigorous selection combined with constant coaching, training and testing ensure that AVR's control room operators will be able to manage the difficult challenges involved with the complex elements of their business.

Mr Rooijen himself is setting an example showing how crucial continual personal improvement is to excel on the job – today and for the unknown future. "I have a bachelor degree in thermodynamics, and at this moment I am doing an MBA at TiasNimbas, at Tilburg University to develop skills for my current job and for possible future jobs." □

PROFILES

TROPICAL HUTCHISON

HPH IN THE BAHAMAS

The island of Grand Bahama may only have 52,000 people - but that is no barrier to serious business. This tiny island houses a range of HWL businesses in The Bahamas, including the Group's only airport.

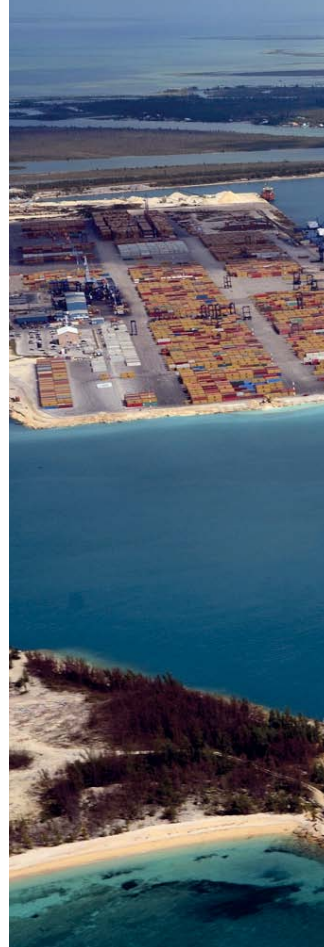


The Bahamas, with a population of fewer than 400,000 people, have some of HWL's most interesting ventures. On the Island of Grand Bahama, where Hutchison Port Holdings operations are, the population is even tinier - only 52,000. Nonetheless, HWL has a surprisingly diverse range of businesses including ports, hotels, a cruise ship terminal and even the Group's only airport.

In 1995, HWL entered into a 50-50 partnership with the Grand Bahama Development Company to develop the Freeport facility. Freeport Container Port (FCP) commenced operations in 1997. It is located on Grand Bahama Island about 100 miles from the port of Miami, Florida. After the completion of the USD83 million Phase IV Development in 2004, FCP now has 1,036 metres of berth length with 16 metres of depth alongside. It contains 57 hectares of stacking area and capacity to handle 1.5 million TEUs per year. It is the deepest container terminal in the region and is a major container transshipment hub.

The Prime Minister, the Rt Hon Perry Christie, spoke earlier this year about the importance of FCP to the local and regional economy:

"In particular, we are keen to make Grand Bahama an international shipping hub. The shipping industry is vitally important to the growth and continued development of



Grand Lucayan the largest resort property in the Bahamas



The Freeport Container Port in the Bahamas:

1.5
million TEUs per year

57
hectares of stacking area



Aerial view of both the FCP and the cruise ship terminal.

Below: The Group's only airport is at Grand Bahama.



the Caribbean region. The same is true for the Bahamas, especially this island of Grand Bahama.

“Currently, the Bahamian Government is doing many things to reinvigorate Grand Bahama Island as the region’s top shipping hub. The government has made it a top priority to highlight the advantages that Grand Bahama will have in capitalising on the expansion of the Panama Canal and the advantages of investing in this particular part of Bahamian paradise.”

WELCOME TO THE BAHAMAS!

In addition to the ports, the Bahamas operations have some exciting and glamorous elements. The Group owns, on Grand Bahama, the island’s largest resort property, Grand Lucayan Bahamas. The cruise ship terminal welcomes over 1.2 million visitors a year coming to enjoy the famous Bahamian hospitality. Given that Grand Bahama’s population is just 52,000, this is a huge flow through for a passenger terminal on the Island.

Freeport Harbour is one of the largest man-made harbours in the world. The cruise ship terminal alone can hold up to three cruise ships at a time. The size and the reception of the terminal are equally eye catching. Tourists are greeted by native dancing and local cuisine, and souvenirs can be found abundant in the 2,600-square-metre retail area.



“Currently, the Bahamian Government is doing many things to reinvigorate Grand Bahama Island as the region’s top shipping hub.”

Rt Hon Perry Christie



PREPARE FOR LANDING AT HUTCHISON WHAMPOA...

Visitors don’t just arrive by ship. The Port in Grand Bahama is integrated with HWL’s only airport operation, which saw another 519,000 visitors hit Bahamian soil. This little gem is known as the Grand Bahama International Airport. Known by its handle ‘FPO’, very few HWL employees know that our ports business also includes an airport.

This 24 hour operation is a full service airport with a runway long enough to accommodate the biggest cargo and passenger jets – and the full service to provide for private jets as well. The airport is one of only two in the Bahamas with US preclearance facilities, a major advantage to both the tourists and the port businesses. The Sea Air Business Centre is another joint venture between HPH and the Grand

Bahama Port Authority. It offers warehousing and distribution services to the port, the airport and the harbour, integrating operations to a higher scale.

A DEVELOPING PARTNERSHIP

HWL also works with the government of The Bahamas to recognise and encourage staff who have been consistent contributors to the Grand Bahama’s operations and Bahamian society. In a recent Long Service Award Ceremony, the Minister of Labour, Shane Gibson, spoke to those being honoured for 10, 15, 20 and even 25 years of service.

“Your theme this evening, ‘Igniting The Fire Through Innovation, Integration and Motivation’ is most timely and appropriate, particularly as we take this time this evening to recognise these 58 dedicated employees for their great passion for, and commitment to, ensuring the success of the Freeport Container Port.

“I wish to assure you that the Government is working diligently to continue to improve Grand Bahama and intends to introduce several new initiatives to this island, which will materialise within the coming months. The outlook for Grand Bahama is a positive one as you enter the last quarter of the year 2013. I am confident that it will continue throughout 2014 resulting in new job opportunities, and developments which will improve the socio-economic development for all Grand Bahamians.” □

EDUCATION

TECHNION AND STU

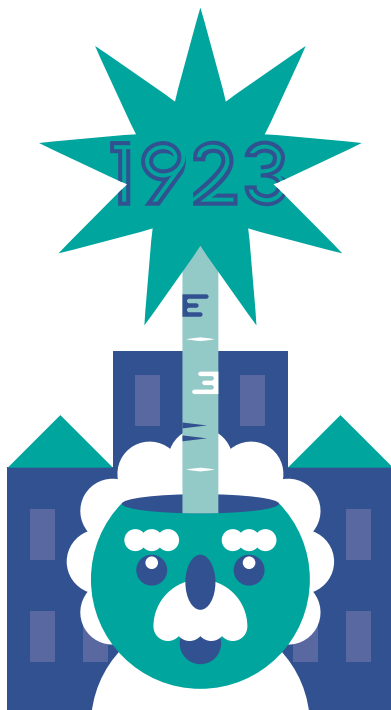
DESTINED

FOR A GREAT

FUTURE

Albert Einstein planted a tree on campus in 1923, starting a tradition continued by resident and visiting Nobel Prize winners which is still standing till this day. Einstein's tree is a Washingtonian Robusta. Strangely enough, it is the same tree featuring on the LKSF logo. Another piece of cultural genetics suggesting a mystical twinning between the new partners.

The Li Ka Shing Foundation has made one of the largest ever donations to an Israeli university to establish a Technology Institute with Shantou University in Guangdong. The USD130 million will join Israel's innovative achievements with China's massive scale of education to form a high tech power house.



In 1924, 16 young men sat in a new university in Haifa, Israel. Halfway around the world in Guangdong Province the same year, a group of students began their studies at a new school in Shantou. It would take 90 years for these twins to come together so they could begin to fulfil their destiny. Separated by continents and cultures, they have finally come together to start building a future for humanity.

Their union will serve a greater purpose in the 21st century, realised through a gift from the Li Ka Shing Foundation (LKSF), leading to exciting new possibilities for humanity in the world of technology.

On 29 September this year, a memorandum of understanding was signed by Technion President Professor Peretz Lavie and Shantou University (STU) Provost Professor Gu Peihua in Tel Aviv for the establishment of the Technion Guangdong Institute of Technology (TGIT).

It is a joint venture by the two institutions and Technion was granted USD130 million from LKSF for the development of TGIT. The grant is the largest ever to the Technion and one of the most generous in the history of Israeli higher education.

There is a mystery here. What destiny connects an Israeli technology leader and a southern Chinese centre of learning? Whose future does this coalition serve?

SHALOM! 你好! מולט!

The obvious story is the short one. The Israel-Li connection was forged after a visit to Technion-Israel Institute of Technology in 2011. Mr Li's private investment company Horizons made placements in some of the more promising ventures there. Mr Li's connection to STU as its founder and principal supporter was an obvious one and the relationship proved fruitful.

But a connection this deep and leading to such a profound commitment doesn't



Visiting the world renowned Technion – Israel Institute of Technology, LKSF Chairman Mr Li Ka-shing is welcomed by its President, Peretz Lavie and wife Dr Lena Lavie.

happen by accident. The story starts almost 100 years ago with a man named Albert Einstein.

START-UP NATION: HAIFA HI-TECH

Necessity is said to be the mother of invention. Israel, a small country in a dangerous neighbourhood, has had necessity – and invention. It has amazed the world with its advanced technological and scientific research. According to the IMD World Competitiveness Yearbook last year, Israel spent a world-topping 4.25 per cent of its GDP on research and development. The country has more high-tech start-ups per capita than any other in the world, earning it the moniker “Start-up Nation” in Dan Senor and Paul Siegel’s 2009 book of that name. In a country with a strong tradition of technological advancement, the Technion-Israel Institute of Technology is the leader in the country. Founded even before Israel, it will now have a chance to lend to the development of the world’s largest country in their drive for modernisation.

This did not happen by accident – it aligns with the strategic objectives of Israel and China. President Lavie, in an open letter to Technion supporters around the world, explained that “The Technion project in Guangdong is fully aligned with the policy of recent Israeli governments that have devoted much attention and efforts to

broaden and strengthen Israel – China relations at all levels. The Israeli Council of Higher Education has declared the development of academic collaborations with China a strategic goal and has even allocated resources for scholarships to Chinese students coming to study in Israel.”

He noted Prime Minister Netanyahu’s visit to China in May 2013 when they signed commercial cooperation agreements. Both gave their enthusiastic blessing to additional collaboration agreements between the two countries – with education top of the list.

When news of the deal got out, Israeli media took note. From *Israel 21c*, Karin Kloosterman reported: “This is the first time China has invested in and completely paid for a university to open up business and start operating in China,” says [Danny] Shapiro [of Technion], noting that the Asian country is already host to satellite campuses of US, Canadian and European universities looking to attract Asian students. “The Chinese and the people we are dealing with wanted the Technion to develop a world-competitive institution of education for engineering and science. They could have chosen any university in the world, and they chose Israel.” Visionaries at the national level have seen a channel in STU and Technion.

NOBEL TREES, PROUD TRADITION

The ‘Technikum’ was founded in 1912 as a technical and vocational college. Its founding pre-dates the founding of the modern nation of Israel, but has been crucial to its development. It has defined the young nation since before it began. Indeed, in 1914 – almost 100 years ago – its first conflict was one that helped define a nation without a country as the community fought over whether to teach in Hebrew – a language with no scientific pedigree or textbooks – or German. Hebrew won the day, and helped define the community.

“Israel can win the battle for survival only by developing expert knowledge in technology.”

Professor Albert Einstein,
President of the first Technion Society

“Imagining the impossible is the necessary and game-changing condition precedent to shaping and making ‘solution revolutions’ into reality...”

“Our responsibility is to invest in reforms... unlock that genius and enable the continuing realisation of human potential... Failing to do so amounts to a crime against the future.”

Mr Li Ka-shing



Above: Mr Li was shown various innovative projects on his recent visit at Technion.

In the early 1920s, physics legend Albert Einstein was inspired to found the first Technion Society and became its Chairman after visiting a devastated Haifa after the First World War. Today this series of supportive Technion societies that span the globe seek to support Israel and humanity through supporting the Technion Institute of Technology. He felt that the establishment of a technical school was crucial to the development of then Palestine and Jewry. He visited the premises in 1923 for the first time and became an ardent supporter. He also planted a tree that still stands in the Haifa campus today. In this, he started a tradition of visiting and faculty Nobel prize winners planting trees on campus. Three Technion Institute professors, in chemistry and medicine, have won Nobel Prizes – and planted trees – in the past nine years. A year later, in 1924, the first 16 students started their classes in Israel’s first university, studying civil engineering and architecture.

It may seem strange that such a venerable institution has become a leader in high tech. But leading professors and technopreneurs have emerged from its centres of excellence in nanotechnology, life sciences, stem cells,

water management, sustainable energy, information technology, biotechnology, materials engineering, aerospace and industrial engineering. This was not by accident – many believed success in technology crucial to the young nation’s survival after the Second World War. Technion became synonymous with Israel’s modernity, success and identity.

Now, it is ready to work with a new partner: Shantou University.

Professor Lavie describes the partnership as “a major breakthrough and an opportunity to strengthen ties between Israel and China.”

“We believe in globalisation. We believe that cross-cultural dialogues are essential. Opening up Technion and STU to these cultural dialogues is very important,” Professor Lavie said.

SHANTOU TWIN

STU, the other player in this grand project, has a long history with Mr Li and the LKSF. Much like Einstein in the early 20th century, Mr Li saw the need for a leading centre of research to lend to China’s modern development. His work to establish a school bore fruit when it was established

in 1981 with its first stone laying ceremony in 1984. It caught the eye of Deng Xiaoping, who encouraged its open development as key to China’s progress.

STU is not without antecedents however. In 1924 – the same year Technion – the university – was founded, the Chaozhou Obstetrics Training School opened its doors to aspiring young medical students. This Chaozhou School was transformed into Guangdong Province Shantou Medical Vocational School in 1959, which was merged into the new Shantou University when it was founded in 1981, giving it some pedigree to complement its youthfulness.

Co-developed by LKSF, the Ministry of Education and the People’s Government of the Guangdong Province, STU flourished. The LKSF has contributed HKD6 billion (about USD770 million) to date, of which 71 per cent was for academic development and 29 per cent for infrastructure.

The LKSF donation continues the tradition of advancing China’s development. In this, they have partners in government. For example, in mid-2012, the Ministry of Education, the Guangdong Provincial Government and the LKSF signed a

“We hope that by combining our research methodologies with the scale and resources of China, we will create a major research institute that will help not only China and Israel, but also mankind in general.”

Technion President Professor Peretz Lavie



Above: On his first visit to Israel, Mr Li meets the country's President Shimon Peres.

“If many universities in Guangdong and China do the same as Technion has been doing in Israel, an innovation-based economy will emerge.”

STU Provost Professor Gu Peihua

tripartite agreement to co-develop STU. The agreement outlines strong financial and policy support from the Ministry and the Provincial Government, and will also grant STU a unique status as a national model for education reforms in China. As for this TGIT project, Guangdong Province and Shantou Municipal Governments will set aside RMB900 million (about USD147 million) to fund the initial operations and the construction of the massive 330,000-square-metre TGIT campus next to STU. And it is going to happen fast.

TECHNION-GUANGDONG INSTITUTE OF TECHNOLOGY

While other institutions may have spent years on deliberating how to proceed, Technion moves as nimbly as the start-ups they have spawned. In August 2012, Technion was already building links by sending professors to China. From 16 to 19 August, the Technion delegation, including Senior Executive Vice President Professor Paul D Feigin, Deputy Senior Vice President of International Academic Relations Professor Anat Rafaeli, Academic Director of the International School of Engineering Professor Amnon Katz, Head of the Center for Systems Engineering Professor Aviv Rosen and Dean of Faculty of Medicine Professor Eliezer Shalev, visited STU.

They were met by Provost Gu Peihua, Vice President Lin Danming, and other representatives from College of Engineering, Teaching Affairs Department, Admissions Office, English Language Centre, and Foreign Affairs Department. They wasted no time in getting down to the technical details that will make the partnership work, such as details about course work, teaching methodology and how students are evaluated and accredited.

The first cohort of TGIT students will commence their studies in the 2015 academic year at Technion in Israel, according to the proposed development plan of TGIT, while the campus is under construction. Undergraduate courses in civil and environmental engineering, and computer sciences, will launch at the Institute. After one year in Israel, the students will return home in the second year to sow the seeds of innovation borrowed from abroad. Research will begin in 2014-15 to improve inadequate health care systems and clinical diagnostic procedures. Joining force with STU, TGIT

will conduct life sciences research based on Big Data, the analysis of huge, and sometimes real time, data collections.

More courses will be offered as TGIT moves forward. By 2020, students will be able to choose to study in other engineering-related fields, such as mechanical engineering. The language of instruction will be English and faculty members will be recruited worldwide. Efforts will be made to channel Israel's technology and technological creativity to China and achieve higher synergy with the local industries in Guangdong.

All this will happen in the time it takes for most academics to consider launching a tutorial. Technion and STU are well matched in their ability to take resources and deploy them quickly and effectively to good ends.

NEVER TOO BIG A DREAM

Provost Gu envisions a bright future for TGIT. The short-term goal is becoming one of the best technological schools in Guangdong Province and then one of the best universities in China, devising new technologies and launching associated start-up companies.

“What Technion has done to advance the Israeli economy through student and staff research and innovation is an example for Chinese universities to follow... If many universities in Guangdong and China do the same as Technion has been doing in Israel, an innovation-based economy will emerge,” says Professor Gu. The joint venture could go beyond transforming China.

Professor Lavie predicts ties between Israel and China will be strengthened and the technology and scientific advancement will progress. “We hope that by combining our research methodologies with the scale and resources of China, we will create a major research institute that will help not only China and Israel, but also mankind in general.”

The joining of Technion and STU sees the unlikely continuation of a dream shared by Albert Einstein almost 100 years ago and Mr Li today. In 1924, 16 students started their studies in Haifa and young Chinese students picked up their medical books. In 1981, STU was born. In 2015, the twins of destiny will be joined in Guangdong to build a greater future for China, Israel and the world. □



PHOENIX & MARTLET

EDUCATION

TWO MYSTIC BIRDS FOREVERMORE

The myths people choose for themselves reveal their souls. The phoenix and the martlet meet as LKSF enables exchange and learning between McGill and Shantou University. Look for growth in understanding in the legal, business and arts sectors between China and Canada.



Man cannot live on technology alone. If the Technion connection (see preceding article) is about the hard sciences and technology, the McGill connection is about the human element of how we structure society and interact with each other. And a large part of the human experience comes from the myths we choose to explain ourselves.

Shantou University (STU) is represented on its crest by the phoenix – the ruler of the birds, its various body parts made up of the six celestial bodies – the sky, sun, moon, wind, earth and the planets. Its majesty, nobility and endurance are the stuff of legend.

McGill is also represented by a mythical bird: the martlet. The three martlets on the crest have no feet – they are always flying like the students and graduates of the school. While a footless bird in Chinese culture suggests a person without roots, McGill is anything but rootless. With 193 years of history in Montreal, Canada, it is steeped in a tradition of excellence – a tradition shared by STU and valued by the Li Ka Shing Foundation (LKSF).

The Li Ka Shing (Canada) Foundation (LKSCF) was founded to support several major projects encouraging cultural

diversity and community involvement. It has supported a range of projects in Canadian universities, mostly in healthcare and medical research. From virology research in Edmonton to children's hospitals in Toronto, the LKSCF has been a major supporter of higher education in Canada.

Recently, LKSCF donated CAD6.635 million (USD6.35 million) to promote McGill University and STU academic exchange through the creation of three important new initiatives between the two institutions: the Li Ka Shing Initiative for Innovation in Legal Education, the Li Ka Shing Liberal Arts Exchange Initiative and the Li Ka Shing Program in International Business. These programmes will benefit 400 students of McGill University and STU in the next five years.

MCGILL - THE MARTLET FLYING HIGH FOREVER

McGill has a long tradition of preparing future leaders in Canada and even some in the Hutchison Whampoa Group. The QS World University Ranking 2012, which evaluates approximately 600 universities, placed McGill in the 18th slot, ahead of all other Canadian schools. It has been ranked No 1 in Canada by Maclean's Magazine for the past nine years. Its success has not gone unnoticed on the world stage – it attracts students from over 150 countries around the



Left: McGill's crest with the three martlets and STU's with the phoenix.

world, with more than 8,200 international students making up 21 per cent of the student body. More than 800 of these future Martlets are from China. This school is no stranger to China and the Chinese.

For McGill, China is the third largest source of international students for the University, behind only the United States and France. "China is one of McGill's most important regions on the international stage, and forging links with high-calibre Chinese institutions is one of our highest priorities," said Professor Suzanne Fortier, McGill's Principal and Vice-Chancellor, who also expressed her gratefulness about the decision. McGill has staff working full time in southern China, to recruit top students, build relationships and serve alumni.

"We are extremely grateful to the LKSCF for their vision and generosity in supporting these wonderful new exchange programmes with STU, which will create new avenues for scholarly and research collaboration between professors and students at our two institutions, expose a new generation of Chinese students to Quebec and Canadian culture and academic perspectives, and provide McGill's students and faculty members with invaluable opportunities to experience first-hand the intellectual, cultural and social milieu of modern China."

STU - RISING LIKE A PHOENIX

STU may not be as old as its new partner, but this phoenix has risen rapidly through the ranks of China's tertiary institutions. Its three founding partners, the Ministry of Education, Guangdong Province, and the LKSF have committed to the "Project 211" programme: a nationwide effort to raise research standards by establishing a network of national key universities and colleges. In 2012, STU ranked No 14 among all universities in China and No 1 in Guangdong among Chinese universities in the Nature and Science Publications Rankings. It also achieved the No 1 employment rate of graduating students among all major universities in Guangdong. Its commitment to the future is backstopped by solid support from the LKSF.

LKSF has already committed and donated more than USD760 million to the University to date. Mr Li Ka-shing's views on education shed light on the huge contribution. "Education is the cornerstone of tradition and progress, of dignity and wisdom, and is one of our key tools to reshape destiny... STU is a platform to instigate reforms in the



Above: McGill University campus grounds.

"Education is the cornerstone of tradition and progress, of dignity and wisdom, and is one of our key tools to reshape destiny..."

Mr Li Ka-shing



Above: The library of Shantou University.

higher education sector in China, and we have attained many milestone achievements in the past decade," said Mr Li. "STU collaborates in a number of fields with first rate universities all around the world, including several in Canada, and it is a great pleasure for me to see this new initiative with McGill come to fruition."

2 BIRDS, 3 PROGRAMMES

Among the three exchange initiatives, the Li Ka Shing Initiative for Innovation in Legal

Education is the most extensive one. It builds upon the highly successful McGill/Shantou Summer Law Programme, which was established in 2010 through a previous gift from the LKSF; it enables McGill and STU law students to participate in intensive two-week visits to the complementary university in alternating years. The new initiative will expand upon that programme. It will also support semester abroad opportunities for McGill and STU students; faculty exchange awards in both institutions; and fellowships to allow talented graduate students and junior faculty from STU to study at McGill. Restless Martlets can fly to China for a spell; in Montreal, future Chinese jurists can experience an intellectual rebirth like the STU phoenix.

The Li Ka Shing Liberal Arts Exchange Initiative will support students from McGill and STU's respective humanities and social science programmes who wish to study abroad at the partner institute. Funding will also be available for a professor from McGill's Faculty of Arts to spend two weeks at STU each year to teach classes, conduct public lectures and meet researchers with shared scholarly interests. These professorships would rotate through disciplines, affording the opportunity to generate new creative collaborations and deepen intellectual ties across many areas of common interest to both institutions.

Last but not least, the Li Ka Shing Programme in International Business will enable students from each institution to travel abroad to take courses. Business students from STU will also be offered opportunities to take part in the acclaimed Desautels International Summer Programme, which is designed to provide undergraduate students from around the world with opportunities to gain critical North American perspectives on issues of global significance.

Numerous Chinese students go to pursue their studies at Canada's best each year. At the same time, following the growing power of China, more and more Canadians move to China to study or look for internships. The LKSCF has identified Law, the Arts, and Business as three areas where greater understanding can benefit China and Canada. These three new exchange initiatives between McGill and STU will build stronger ties between the two places, benefitting not only participating students and faculty but also enriching both countries for decades to come. Where these two birds fly, prosperity will follow. ■

HWL PHOTO CONTEST



CULTURE

THE WINNERS ARE IN!

The winners are in! Check out the top three winners in four categories as 127 members of the HWL family were 'living in the fish eye lens, caught in the camera eye.'

The winners of the HWL photography contest will not only be honoured in the pages of *Sphere*, but also through the publication of their work in a calendar printed and distributed to all contributors, winners and to the world online. 127 participants contributed over 200 photos from around the world. The four categories of photos were:

- 1) At Work
- 2) Camaraderie
- 3) Hobbies, Pastimes, Relaxation
- 4) My Country, My City

Underwater shots, out of place little people, spiritual skies and a cornucopia of visual treats await you on the HWL Employee Information Portal. Come see all submissions online and share them with your friends and family.

Explore the world of Hutchison through the people that drive HWL forward to serve each other and the world in 52 countries.

AT WORK

It is a gift to be able to see excitement, beauty and even have a little fun at work.

Prize winners took an HWL original, Dwaine Pipe, and matched it with the iconic Angel of the North. The Angel represents the coal miners of Tyne and Wear before the rise of the information age. Dwaine Pipe and the Angel claim the same symbolism. Northumbrian Water is now, for all its pipes and valves, a fantastically high-tech operation.

A Spring Sunset in Milan was an inspiration for Italian Marco Brivio who saw reflected beauty in the 3 Italy office. In Denmark,

Thomas Olsen got surreal with this nighttime shot of OISTER.

CAMARADERIE

If Europe took "At Work", Asia owned "Camaraderie". HWL's terminal in Korea nailed it with teamwork, as did the Hutchison Whampoa Properties team in Qingdao. In Hong Kong, respect for the elderly reigned as their staff created an umbrella chain to protect visiting elders.

This kind of caring for colleagues and our broader community is a spirit that HWL strives for. A foundation of caring makes us more connected with our work, our community and ourselves.

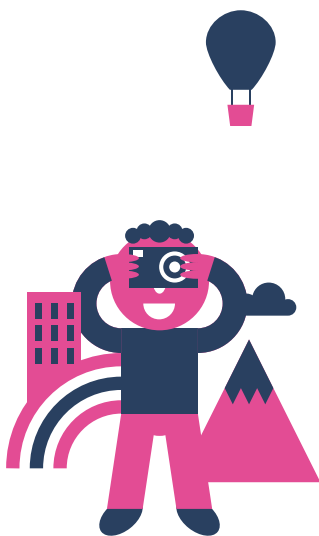
HOBBIES, PASTIMES, RELAXATION

The winners in this category may have hobbies, not much relaxation!

The Italians create life and risk life for great shots! One future customer is in the ultimate safe place - in their mother's womb. The other: a daredevil, soaring high above the Italian countryside with only 3 for courage! The third winner is mixed: one young daredevil and one happy father. While we love work, we must always make time for our loved ones, big and small.

MY COUNTRY, MY CITY

Love of nation can be quiet and deep, like an undisturbed subterranean lake. It can be joyous and boisterous like a bubbly stream. Edward Fabian Lores Lopez brings us a whimsical scene of a local spot of pride - and then tells us of its dark past. Malta inspired our Barcelona port's employee Marta Gomez Garcia to snap romantic Mgarr. Xinjiang provided the backdrop for this magnificent view of a river that made Chris Huang think of 'fairylend'. □



Left: The photo montage containing all entries.

HWL PHOTO CONTEST

A AT WORK

Love your Drain Mascot: Dwaine Pipe is a real Angel of the North, helping Northumbrian Water's sewerage team to keep communities in North East England blockage-free.

Leanne Clough, Northumbrian Water, UK



B AT WORK

"Spring Sunset in Milan"
H3G Milan Offices seen from a different perspective reflected in a street puddle.

Marco Brivio, 3 Italy, Italy

C AT WORK

Our vigorous customer service has moved to the beach. The fairy tale universe of OiSTER unfolds.

Thomas Olsen, 3 Denmark - OiSTER, Denmark

G HOBBIES, PASTIMES, RELAXATION

Father and Son - Soar with your dreams

Tran Chien Thang, Vietnamobile, Vietnam



D CAMARADERIE

Every move I make relies on you.

D K Kim, Hutchison Korea Terminal, Korea

E CAMARADERIE

The Hutchison Whampoa Property Group Qingdao Volunteer Team in the centre garden of The Harbourfront in Qingdao.

Hutchison Whampoa Property Group - Qingdao Volunteer Team, China



F CAMARADERIE

"Umbrella Channel"
Volunteers create an umbrella channel to prevent the elderly from getting wet when entering the social work event venue.

Leung Man-hin, Hongkong International Terminals, Hong Kong



G



H

H HOBBIES, PASTIMES, RELAXATION

Con tre si vola !!!
(Flying with three!!!)

Colella Giorgio, 3 Italy, Italy

I HOBBIES, PASTIMES, RELAXATION

Nicolò is the child of my colleague Claudia. The future is coming. A future of new people who will be using 3!

Barbara Meloni, 3 Italy, Italy



I

J MY COUNTRY, MY CITY

Fairyland in Kanas, in Mongolian means "the beautiful and rich, the mysterious."

Chris Huang, Hutchison Whampoa Property Group - Nanjing, China



J



L

K MY COUNTRY, MY CITY

Mgarr, port of the island of Gozo, Malta. In the background: The Church of Our Lady of Lourdes. Of the three islands that make up Malta (Comino, Malta and Gozo), the Isle of Gozo is the best in terms of scenery, culture with a grand historical, mythological, story.

Marta Gómez García, Barcelona Europe South Terminal, Spain

L MY COUNTRY, MY CITY

This island is an icon in our city. The island is called Isla de Sacrificios ("Island of Sacrifices") because our ancestors occupied this place as a religious centre. And here some people were sacrificed in honour of their gods.

Edward Fabián Lores López, Internacional de Contenedores Asociados de Veracruz, Mexico



K



Mark Wahlberg meets Mr Li Ka-shing.

IDEA

GLOBAL CONNECTIONS IN HIGHER EDUCATION

The LKSF has repeatedly backed global university connections. Why?

Hong Kong newspapers carried a rare picture recently – two men for whom the hard knocks of life didn't allow them to finish high school – who have been spectacularly successful. Mark Wahlberg is a huge Hollywood star with producer credits on one of the smartest TV shows of the last decade: the multi-award-winning *Entourage*, a cutting inside look at his own industry. He sat down with Mr Li Ka-shing during a break in filming of *Transformers 4* in Hong Kong.

Mr Wahlberg and Mr Li discussed the tough circumstances of their lives that caused them to leave school early. Mr Wahlberg did eventually – in September of this year – receive his high school equivalency. Quoted in *People*: "I didn't want the kids [his children] saying, 'You didn't do it, so why do I need it?'" he said. "They are all wanting to do things in their future that require an education."

Mr Li has a deep commitment to education that is manifested through the Li Ka Shing Foundation (LKSF). The LKSF has the means to support a broad range of charitable causes – and does. But education is, in particular, of interest. And not just education, but the exchange of knowledge through cross-university cooperation.

The recent contributions to bring Israel's Technion to Shantou University (STU) and the McGill-STU exchange are only the latest in a long series of supporting cross-university connections. Details about these gifts are detailed in this publication and beg the question: why cross-university tie-ups?

The connections promoted here come with no guarantees of success. Israel's extraordinary creativity and technology is legendary. Matching Israeli tech verve to China's deep academic tradition may

produce rapid progress and insights in the area of Big Data, life sciences, health systems and mechanical engineering. The McGill-STU exchange connection might produce understanding and innovation in the area of law, liberal arts and business education.

However, the fact is that no one really knows exactly what benefits will arise from these liaisons. It requires the type of informed risk-taking that HWL managers must take when outcomes are uncertain. We may not know what the results will be, but we know nothing ventured, nothing gained. The LKSF is in the rare position of being able to initiate education reforms that others cannot.

Mr Li understands this responsibility to support mankind's higher endeavours: "In this new world of fluid boundaries, the fast changing, fascinating, and transforming power of technology sometime does seem to wave like a magic wand, bringing new models and opportunities to many frontiers and generating new solutions to entrenched problems at a pace that is often hard to keep up with. Our responsibility is to invest in reforms in education that unlock that genius and enable the continuing realisation of human potential, building a knowledge rich society and securing a sustainable quality of life for all. Failing to do so amounts to a crime against the future."

Both Mr Li and Mr Wahlberg appreciate that their circumstances are extraordinary – and not easily imitated. For most, education is the key. Mr Wahlberg demonstrated this by going back to school to set an example for his children. The LKSF shows commitment by connecting the world's best centres of learning around the globe. What exactly will arise from the liaisons cannot be known – but it is certainly worth the effort. □







BIG DREAMER