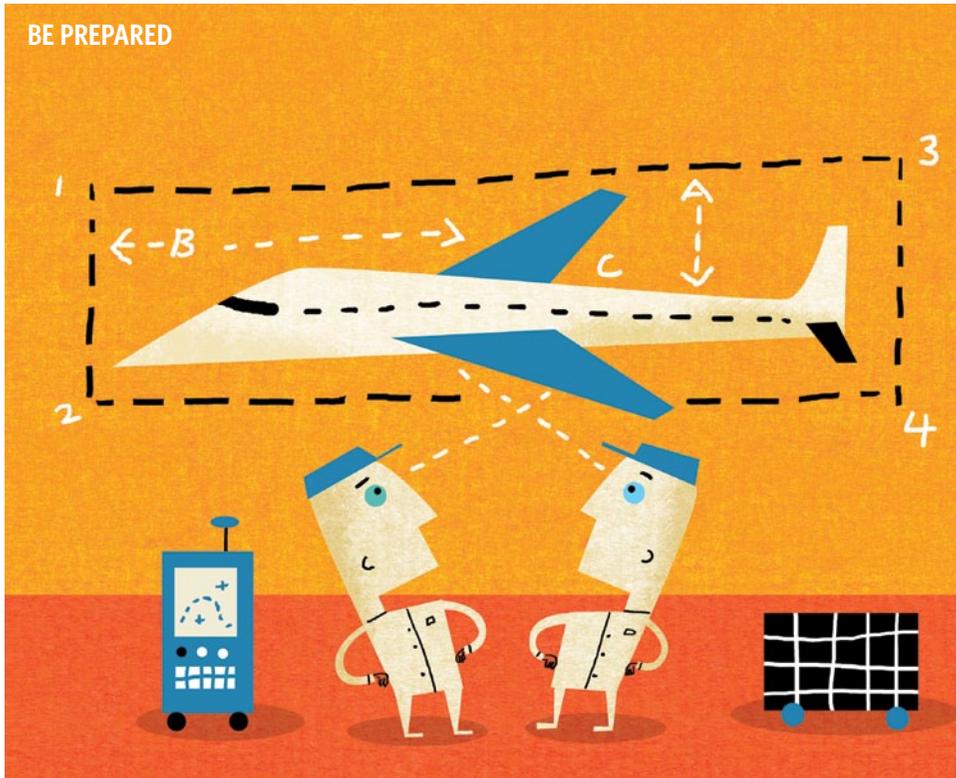


EXCELLENCE

BE PREPARED: HUTCH'S TRAINING REGIMEN



厲兵秣馬

僖公三十三年
左傳

Sharpen the swords,
feed the horses.

The Chronicle of Zhou
(659-627 BC)

Sharpening one's wits, knowledge and experience is vital to be ready when the time for action comes. Hutchison Whampoa takes training very seriously. A successful group must be able to seize opportunity when it presents itself, blunt the effects of disaster and execute top-notch performance every day. This does not happen by accident, but only through relentless training of its employees.

Such training is a group-wide phenomenon. It enables planes to stay in the air where they belong, thousands of containers to criss-cross the globe, valuable oil to be made from raw muck, and staff and customers to be kept safe. From Canada's frozen north to the violent typhoons of The Philippines, Hutchison staff are ready for whatever the world can throw at them.

UNDER PRESSURE

Extreme conditions that HWL team members face are often external. Some are generated internally. Husky Energy Inc's team in Lloydminster, Canada deliberately works with otherworldly extremes that can be deadly if mishandled. Temperatures of up to 427°C and pressures of up to 20,000kPa are used daily, creating an environment as hot as the surface of Venus with more

than twice the atmospheric pressure.

It creates these conditions at the Lloydminster Heavy Oil Upgrader to transform viscous, thick, black, heavy oil and, using that massive heat and pressure, to upgrade it to the clear, free-flowing oil and diesel that the world runs on. Converting the heavy oil demands the highest standards of equipment, safety, knowledge, training and vigilance.

Control room operators at Husky Energy's Upgrader are like pilots who spend hours in flight simulators before taking the controls of real aircraft. Before assuming responsibility for piloting the controls of the Upgrader, Husky Energy's operators spend hours training on all aspects of the facility on state-of-the-art simulators.

Husky Energy has been using simulators since the Upgrader was constructed in 1992 and, like the Upgrader itself, the simulator system has steadily improved. The current simulators give operators and trainees a realistic picture of the Upgrader controls. Every possible scenario and emergency that can happen in the facility can be programmed into the simulations. While dangerous situations may happen once, or even never, over the lifetime of the Upgrader, simulators ensure operators are ready for any eventuality. Husky Energy works with the simulator software

developers to ensure the simulator exactly replicates the Upgrader's systems.

Experienced operators and management regularly use the simulators for emergency response training exercises. Mr Miles Berry, Operations Superintendent at the Upgrader, oversees the training and retraining of operators. A 34-year Husky veteran, Miles knows what it takes to keep the facility producing efficiently and safely.

"Training new control room operators to use the simulators ensures new operators are thoroughly and consistently trained. On the simulator, operators will face every possible shutdown, start-up, and upset condition that could occur in the Upgrader before they ever take control of the plant," Miles said.

Sometimes this means moving quickly and efficiently through planned maintenance. "When we have a turnaround or scheduled maintenance that can involve shutting down major areas or even the entire plant, we can practise every aspect on the simulators before we go into the actual project," according to Miles.

Sometimes it means averting disaster. "Recently, a newly trained operator had a compressor shutdown show up on his panel. From his training, he knew exactly what to do and ran through the correct



procedure for taking the compressor offline and rerouting the oil flow.”

The Upgrader’s simulation room can train up to nine new operators a year, important in an industry where operators are in high demand. Husky Energy recently added a second, adjacent simulator room at the Upgrader, so both training and retraining can take place at the same time. Before simulation training, operators were trained by observing co-workers. “Training a new control room operator using conventional training methods could take up to nine months. It also limited the trainee operator’s exposure to both planned and unplanned events,” Miles said. Simulators mean more, better trained operators, faster.

3-11: EARTH AND SEA STRIKE

The Lloydminster Upgrader generates its own extremes to get the job done. Other Hutchison units are assaulted by Mother Nature at unexpected times. The very earth shakes, the seas rise and Nature cannot be denied.

The 3-11 earthquake in Japan rocked the world in 2011, leaving shock and grief in its wake. The earthquake disrupted four major systems which relied on submarine cables connecting Asia via Japan to the United States, South Korea and China. At a time when it needed communications the

most, Japan’s connectivity to the world was seriously impaired.

Within four hours, the Hutchison Global Communications Limited (HGC) cable service was fully restored. The swift recovery was delivered in the wake of the worst earthquake in Japanese history. Speaking to *Sphere*, Mr Andrew Kwok, President of International and Carrier Business, recalls that the earthquake struck at around noon. It was not until dusk that HGC received the full cable failure notifications. Preparation work, however, had been in full swing before the notifications came in.

Having to restore full service in just a few hours meant that prior training was key to the HGC team’s effectiveness. One way to meet a crisis is to meet it prepared, and HGC had plans in place for different cable failure scenarios. When a certain cable fails, staff are trained to react by making use of the redundant capacity of other cable systems to take up the traffic of the failed cable. However, multiple cable failures are much more complex than a single cable breakdown. Most often, HGC can only prioritise the services for restoration and outline the redundant resources for remedy beforehand. So, as soon as the earthquake ripped across the Pacific floor, HGC moved immediately to deploy its hard-won expertise to devise a

handful of contingency plans for different cable failure scenarios and the ensuing breakdowns they were anticipating.

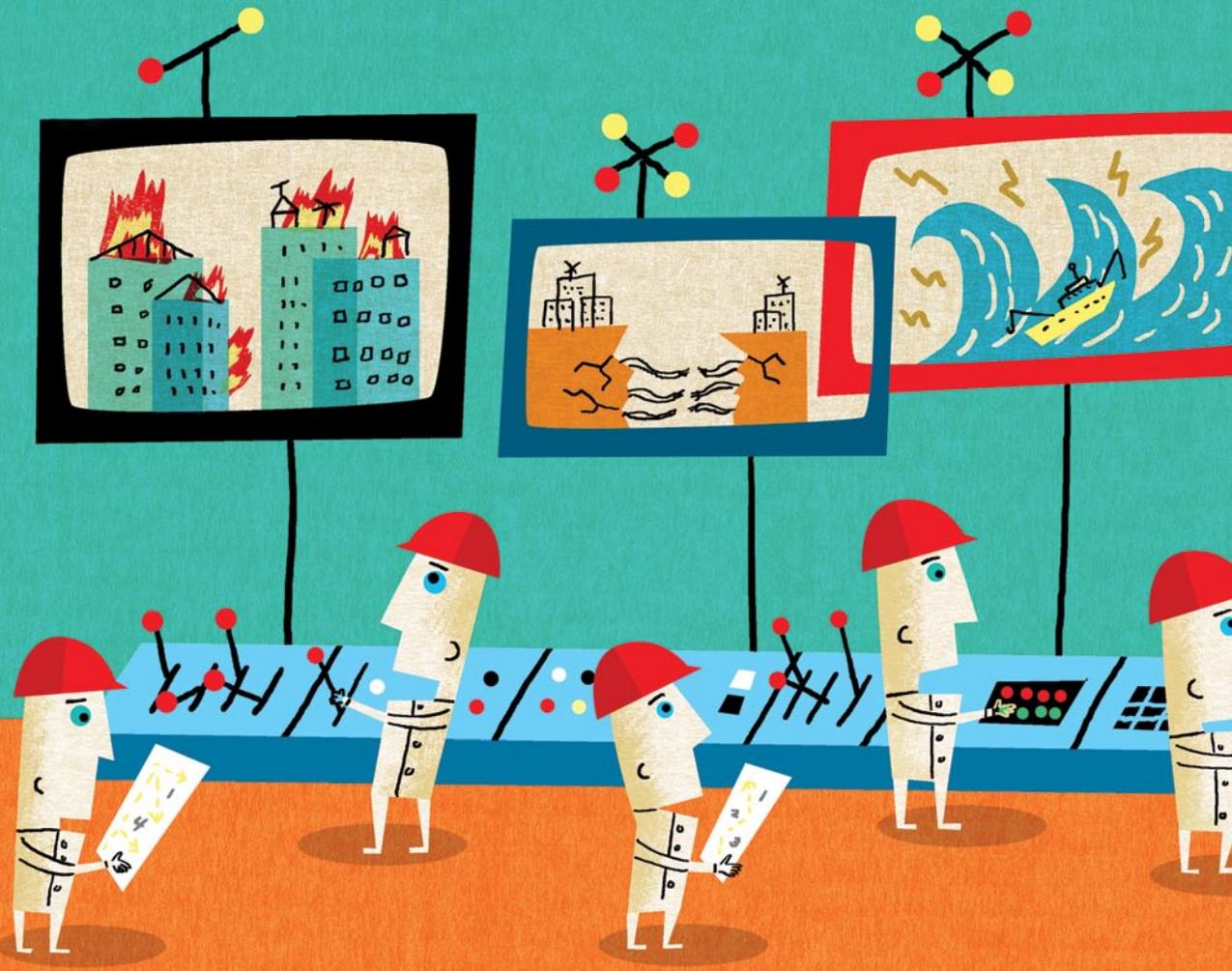
On top of contingency planning, the quick response to the emergency and the short recovery owe much to HGC’s protocol of combining regular maintenance with practice drills which Andrew believes “prepares our engineers and facilitates recovery efforts among different teams”. These procedures were developed a few years ago and are practised every one to two months.

Disaster control is not limited to natural phenomena - cataclysm can also be caused by humans. During riots in Thailand, HGC asked Thai affiliates to set up cameras to oversee the surrounding environments of cable sites. This would allow both the Thai and Hong Kong staff to react immediately to any uprisings that might damage property and disrupt service.

In the world of business where prior planning is key, HGC has been successful not only in seizing opportunities, but also by being ready to avoid complete disaster when catastrophe strikes.

NATURAL DISASTERS, MAN-MADE SOLUTIONS

Not to be outdone, The Philippines may be one of the most regularly benighted places



on earth. Lying on a major fault line prone to earthquakes, they also have a front-row seat to every typhoon coming out of the deep Pacific.

Recent experience has provided no respite. The Philippines have been wrecked by severe natural calamities of late. The Manila flooding last summer, Typhoon Haiyan and a massive earthquake all happened last year. Controller of Internal Audit and Loss Prevention for Watsons in the Philippines, Ms Myracris Cordova, has seen a higher rate of natural disasters hitting the country in recent years, and the company reacted by establishing a programme of training early last year.

The training is new, developed by the company itself and based on their own experience of handling crises. They have had ample opportunity to put this training to use. "The impact of Haiyan on Watsons was very, very small," says Myracris and she credits this to their training. Haiyan inflicted approximately USD1.5 billion of financial loss on the nation, but only minimal damage to Watsons.

High-level managers and store supervisors attend a training workshop once a year

on crisis management policy, evacuation policy and more. Store supervisors brief their respective staff in stores about what they should do to prepare for an oncoming crisis. A bulletin board in every store is updated twice a month to provide the frontline staff with the latest details concerning emergency contacts and evacuation points. Weather alerts and trends are also on the board. With most of Watsons' stores located in malls, Myracris explains that drills are held by the malls in March and November every year.

Prior to Haiyan's savaging of The Philippines, Watsons set up a Crisis Management Committee and held conference calls with each controller who headed a response team across the nation. The priority was the safety of the employees and they were told to stay at home if commuting to work was too dangerous. Valuable goods and safes were relocated to higher shelves. A well-defined system was put in place for the ease of making insurance claims. And as it turned out, loss of inventory was reduced and recovery was speedy. For instance, the two Watsons stores submerged in the Manila flooding last August were back in operation within one month.

These procedures didn't arise from serendipitous epiphany. They were derived from hard-earned lessons that drove change. Myracris's team needed to up their game after the 2009 Manila flooding, when training procedures had yet to be designed. Lost and damaged product accounting, inventory control for insurance purposes and even employee contact procedures were implemented to instil confidence and get to the level of disaster readiness the team now enjoys.

A radical overhaul in procedures, well-established training programmes, and diligence in repetitive drilling mean the teams now know what to do in the event of almost any disaster. Having learned from the past, they are well prepared for the future.

HPH'S 27,000 DAILY REASONS TO TRAIN

Hutchison Port Holdings Limited (HPH) plays a key role in the continuing development of 52 ports around the world and Hong Kong is among the busiest. In Hong Kong, Hongkong International Terminals Limited (HIT) has a staggering daily average of 27,000 container movements. To maintain order over this



24/7 dance of ships, containers, cranes and trucks, continuous training is needed to ensure that everyone knows their steps.

Within the engineering department of HIT, more than 20 per cent of the staff have worked in the port industry for less than 18 months. "We have an imminent need to train more engineers and technicians to deal with regular repair and maintenance work as well as new port equipment projects," according to Mr Eric Su, General Manager of HIT's Engineering Department. The department regularly runs its PEA – the Port Engineering Academy. "It is a one-year in-house training programme aiming at accelerating the learning process of the new engineers and technicians," Mr Su explained.

The training programme was designed for all new technicians and engineers with less than two years experience in the ports industry. Led by one of the managers in the engineering department, all PEA trainees have to attend a three-day classroom training within the first two months of the programme. The main purpose is to teach trainees the basic principles of the equipment used in HIT terminals and the

general safety precaution measures.

After that, the trainees are given classroom lectures and/or on-site tutorials once a week from month 3 to month 12, with a final examination at the end of the programme.

FULLY EQUIPPED

The introduction of new technology is a constant in this heavily competitive industry. Yard cranes are a vital part of the machinery mix. At HIT, two types of yard cranes can be commonly found: Rail Mounted Gantry Cranes (RMGC), powered by electricity, and Rubber Tyred Gantry Cranes (RTGC). RMGCs are giant, highly automated container handling cranes with auto-stacking capability. Recently, HIT has introduced crane remote control technology, allowing the crane operators to work in an indoor environment and control yard cranes from their desk to improve working conditions as well as safety and efficiency levels.

To gain authorisation to control the RMGCs is a rigorous process. First, an operator needs to attend an 18-day practical and theoretical training course on RTGC. An RTGC licence will be issued after the operator has passed a technical assessment. This is followed by two weeks of supervised on-the-job training, where an experienced operator oversees and monitors the new operator's performance. The operator must have a minimum of six months' experience operating an RTGC and a good performance record before he or she can apply to operate an RMGC. A further eight-day training course is required for the candidate, followed by an examination in order to obtain an RMGC licence. Operators are expected to work in the remote control centre and they need a good performance record and to undergo in-depth training covering the workflow and job allocation of the equipment.

Training is designed to ensure safety, efficiency and speed at the ports, keeping workers safe and HPH competitive. In China, making sure passengers arrive first – alive – and second – on time – falls to the continuously training team at GAMECO.

SECURING CHINA'S FRIENDLY SKIES

The National Safety Council in the United States calculates the odds of dying in a car accident to be one in 98 in a lifetime, compared to one in 7,178 for an aviation accident. You may argue about the figures but the fact is that airplane accidents seldom happen and meticulous flight maintenance is the reason why. Speaking to *Sphere*, Mr Sam Cai, Manager of the Training Centre in Guangzhou Aircraft Maintenance Engineering Co Ltd (GAMECO), explained that their training programmes are rigorously designed and reviewed.

GAMECO works closely with China Southern Airlines to ensure training is constantly up to date. When there are purchases of new airplane models, GAMECO sends their maintenance professionals to attend training courses provided by the airplane manufacturers. Bringing the maintenance training experience back home, maintenance professionals open in-house training courses in GAMECO. However, opening new 'type training' courses on new models needs approval from the Civil Aviation Administration of China (CAAC). The authority evaluates the type training courses against the international standard developed by the Air Transport Association. Once a type training course is approved by CAAC, other aviation organisations in China can adopt the training. This establishes a uniform standard of maintenance throughout the country. Other training courses which require CAAC's approval are component repair, basic maintenance and fundamental skills. GAMECO provides these courses in-house and their staff can only sign off or perform maintenance if they survive these CAAC-approved training courses.

In addition to the CAAC-approved courses, maintenance staff from GAMECO are required to attend other professional training courses within the GAMECO quality system. There are 50 to 70 courses available for staff to take every month in order to handle higher level maintenance tasks. For example, maintenance staff in GAMECO have attended at least 200 hours of lessons and 10-day hands-on practical training dedicated to the new Boeing Dreamliner, followed by various types of engine related training. GAMECO staff also receive model type information updates in recurring training and retraining activities. On top of the training, representatives from airplane manufacturers attend at least two meetings a day with GAMECO to discuss the challenges encountered in daily maintenance operations and the latest updates on aviation technology.

GAMECO understands that even a tiny problem discovered in a flight inspection can have huge repercussions or even result in a fatal accident, and that these outcomes have to be avoided at all costs. Rigorous training ensures that the worst eventualities won't happen on their watch.

Sharpening the sword, from the ancient Chinese idiom, doesn't just refer to your equipment. It means sharpening your mind. Across the Group, training, learning and reviewing have made dramatic leaps in operations possible, improving efficiency and even saving lives. □