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POSITIVE PROGRESS REPORT

But the airline has to do better, says Cathay Pacific Airways CEO, Rupert Hogg

Orient aviation 25 YEARS

Asiana plans restructure after co-CEO Park quits

NokScoot returning to North Asia network strategy

Jet Airways propped up with funding lifeline

INDUSTRY INSIGHT REPORT
Breakthrough IoT connectivity for airline cabin

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COVER STORY


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Boeing battling intense global scrutiny

There were no survivors from the 737 MAX Lion Air and Ethiopian Airlines crashes, but unlike the majority of such accidents, these two tragedies have far wider ramifications for the aviation industry. They draw attention to at least two aspects of airline operations that only have become evident in recent years.

Being first to market with a new jet used to be a winning formula for carriers striving to stay a step ahead of rivals. No more. Being a launch customer is proving to be a risky and costly business.

Two prime examples were the long delays in the introduction of the A380 and 787 Dreamliner. There were serious issues with lithium batteries igniting on the Dreamliner and later, problems with Rolls-Royce engines that forced the grounding of several of the type.

For Qantas, the dramatic engine explosion on a Qantas A380 not long after it took off from Singapore was caused by a poorly produced Rolls-Royce fuel pipe. Similar issues, this time with Pratt & Whitney engines on the new A321 neo, have again caused in-flight shutdowns and groundings.

The MAX was not so lucky. The Lion Air and Ethiopian Airlines accidents raised the question of whether the certification process, for both airframes and engines, is sufficient when aircraft operating technology is becoming more complicated than ever.

The second issue prompted by the MAX crashes is whether pilot training is keeping abreast with the cockpit of new model airliners. Clearly not enough attention has been given to conversion training for pilots on the MAX. They found themselves at a loss when new technology, to which they were not accustomed to or maybe did not know was available, misbehaved.

Following a number of incidents of pilots reacting wrongly when cockpit technology backfires, many training academies have adjusted their courses to ensure students learn to fly with the technology but also are properly trained to "fly the plane" without it.

As for the certification of aircraft, their systems and engines, no matter how thorough the ground and flight tests are, there are faults that won't show up until these aircraft are operated under the pressure of day-to-day commercial flying. And then there is the regulatory issue. Exemplary standards must be maintained to ensure new aircraft types have undergone the testing necessary for safe flight. There is no harm in requiring new, higher levels of testing before these machines fly with passengers on board. ■

TOM BALLANTYNE
Associate editor and chief correspondent
Orient Aviation Media Group

Focus on Walter Cho after death of disgraced Korean Air patriarch

At press time, **Korean Air (KAL)** announced its **chairman** and **CEO, Cho Yang-ho**, 70, had died peacefully in a Los Angeles hospital on April 7. No cause of death was announced but a company official told Reuters Cho has suffered from a lung condition. His passing came just shy of three weeks after he was voted off the board of the airline group by disgruntled shareholders.

At the airline group's AGM, activist investors from a government pension fund led the shareholder charge to oust Cho following allegations he favored family members in the group's business dealings and had embezzled MRO and duty free revenue meant for the carrier.

Cho was the first controlling shareholder of a Korean chaebol to be forced off a board. He continued as KAL chairman and CEO after his sacking as these positions are non-board roles.

Patriarch Cho had succeeded his father at KAL in 1999. He built Korean Air into one of Asia's largest airlines and was a founding member of the SkyTeam airline alliance. He controlled 30% of Korean Air through parent company, Hanjin Group, of which he was also chairman.

However, his achievements have been clouded by allegations of tax evasion that extend back for decades, corruption cases that charge Cho with stealing at least US$17 million from the company and public outrage at the entitled behavior of his daughters, "nut rage" heiress, Cho Hyun-ah, and tantrum-prone sister, Cho Hyun-min.

At this early stage, it is expected Cho's son, Korean Air president and COO, Walter, 43, will succeed his father at KAL, but not before he overcomes several regulatory hurdles including a large tax bill, in the path to the top job.

In an **Orient Aviation** cover story in November last year, the younger Cho made it clear he knew he must lead change at KAL. "I believe our brand and reputation starts with our employees. I am trying to communicate more with them. Making sure they are happy working for us and with us and making sure the product is there. I think happy employees generate more happy customers."

Rival Korean carrier, **Asiana Airlines** also faces uncertain times following the resignation of co-CEO, Park Sam-koo, who also has resigned as chairman of parent, the Kumho Asiana Group and as co-CEO of shareholder, Kumho Industrial. ***Asiana restructuring must finally deliver page 13***.

Co-Asiana CEO, Han Chang-su, is now sole CEO of the airline. After the announcement of Park's departure, Asiana shares spiked by 15.1%, before settling back to a 2.9% rise. Kumho Asiana said Park met the chairman of the group's main creditor, Korea Development Bank (KDB), on March 27 and asked for help to normalize Asiana Airlines.

The Asiana parent said it would launch an executive search for a Park successor and establish "an emergency management committee headed by the vice chairman of the group to normalize our management in a short period of time and hire a respectable person outside the company as the new chairman". The departed Park is the biggest shareholder, at 31.1%, in Kumho & Company, the holding company of Kumho Asiana Group. ■

Asia-Pacific travel binge accelerates

Seventy five per cent of the top 20 busiest routes in the world were in the Asia-Pacific in the 12 months to March 31, **OAG's regional sales director, Japan and the Asia-Pacific, Mayur Patel**, said at a recent media briefing of the OAG Busiest Routes 2019 survey.

Asia also had the top five busiest routes, clustered around

the hubs of Bangkok, Hong Kong, Kuala Lumpur and Singapore. On average, domestic and international Asian routes are served by seven airlines. In the U.S. and Europe, it averages three.

Topping the list for 2018 was Kuala Lumpur-Singapore with 30,187 flights operated by eight carriers, followed by Hong Kong-Taipei with 28,447 flights. In third place was Jakarta-Singapore (27,046 flights), Hong Kong-Shanghai (20,678) and Jakarta-Kuala Lumpur (19,741).

Asia took out four of the five top routes for journeys of less than 1,500 kilometres led by perennial record holder, Jeju-Gimpo, with 79,460 flights a year or 200 flights a day flown by seven airlines. Melbourne-Sydney was in second place with 54,102 flights from four carriers flying 148 flights a day.

Delhi-Mumbai (45,188 from six carriers), Fukuoka-Tokyo Haneda (39,406 from four carriers) and Sao Paulo-Rio de Janeiro at 39,747 from three airlines, rounded up the top five city pairs.

Indonesia is home to more of the top 20 busiest domestic routes than its neighbours, with three. Australia, China, India, Japan and the U.S. each have two. In China, three of the busiest medium haul routes – 1,500-3,000 kilometres – originate and end in Beijing. All of Asia's busiest routes operate within Asia, OAG said. ■

China Airlines Hsieh adds chairman to work roster

China Airlines (CAL) has named the carrier's president, Hsieh Su-Chien, chairman of the group, after directors of the airline voted to dismiss Ho Nuan-Hsuan. Hsieh was promoted because of his skill in dealing with a seven-day pilot strike in February where he was praised by the Taoyun Pilots union, an unusual circumstance in Taiwan's testy aviation environment.

A graduate of the private Soochow University, Taiwan's first western style college, Hsieh joined China Airlines in 1979 and has worked his way through the ranks at CAL. ■

Firm no from Fernandes to Malaysia Airlines rescue

Finding a buyer for a debt-ridden, unprofitable airline is not easy these days, but **Malaysia's prime minister, Mahathir Mohamad**, told media last month there had been interest from some local and foreign companies in taking the plunge of investing in the flag carrier, Malaysia Airlines.

For many in the industry the prime minister's comments immediately brought to mind **Tony Fernandes** and the **AirAsia** group. That is wishful thinking it turns out. In comments at the annual Credit Suisse Asia Investment conference in Hong Kong last month, the AirAsia group co-founder told the **South China Morning Post** that generally he did not believe in acquisition because it came with a lot of inherent issues. At the time he was answering a question about an AirAsia investment in HK Express (HKE), but he then extrapolated his position.

"My philosophy has been organic growth. When you import through acquisition, it comes as a risk so it is not preference."

"Many people will say [Air Asia's] expertise could be used to hurt Malaysia Airlines and benefit AirAsia. There is a genuine interest to help but in this day and age, not everyone will see it that way. It's best we do our own thing. We have a lot on our plate."

Macau however, and the Greater Bay area of southern China, does interest Fernandes. "Entering China could be via Macau," he said. "We do not have to be in Mainland China, but being in Macau is like being

in China. If the chance came up to be based in Macau it would be another way in."

AirAsia is the second commercial airline operator into Macau after **Air Macau**. It is setting up a ground handling unit at the airport and intends to start selling seats on public transport to bring in customers from the Greater Bay Area of China's southern coastline, a government backed development zone with a 60 million plus population.

Three weeks ago, Malaysia's Mahathir revealed he was considering whether to shut, sell or refinance MAS and said a decision would be made "soon". "There are certain parties who are interested to buy (the airline), so we don't reject [the possibility of selling])," he said.

The government has been considering the options of changing the airline's management, downsizing the carrier or expanding it. "Although we hired foreign management, MAS (the carrier's former acronym) still faced losses. Therefore, one of the options is to sell. I love MAS. I want MAS to be a national airline, but it looks like we cannot afford it," said Mahathir. ■

Cathay Pacific's to do list at HK Express

By Will Horton

When Cathay Pacific first visits the office of new acquisition HK Express (HKE), one of the initial changes it may suggest will be a taking down of posters with aphorisms coined by the founder of HNA, which is the seller of HKE.

One of the sayings is: "Kindness to youth instils vigour in elders." That could be the future of the relationship. HKE has been a LCC for only 5.5 years and previously was hardly known. In contrast, Cathay is one of Asia's storied airlines.

Cathay will be able to help HKE, but Cathay may gain more by being able to transform into a more efficient and modern full-service airline.

Cathay Pacific announced its intent on 27 March to acquire HKE by the end of the year, subject to all approvals, and said that HKE would remain as a standalone LCC.

It is understood to have entered talks with HKE on the assumption the LCC has a revenue problem. Some sources claimed Cathay did not understand revenue management, inventory control and how low fares could still be profitable. HKE is said to actually have a cost problem. This is not inherently linked to repeated claims that Hong Kong is too costly to have a local LCC. Low-cost is not relative to Ryanair and AirAsia benchmarks. Low-cost in Hong Kong should be compared with direct competitors.

HKE had an unaudited loss of US$18m in 2018 and a profit of US$8m in 2017. The recent loss was mostly due to aircraft under-utilisation from A320neos and restructuring. Cathay and HKE could jointly manage their Hong Kong slots. Cathay's bigger holding may mean it can largely keep its network intact but with adjustments that will make a big difference to HKE's smaller slot holding.

This raises questions about how Cathay and HKE will work together, and if Cathay parachutes in its own staff. Cathay's due diligence showed it does not have a low-cost mindset, according to sources.

A few years ago, when All Nippon Airways established LCC Peach, its managers wanted extra cabin crew on Peach flights because that was how ANA did rostering. The ANA managers thought they could be a budget airline because staff took turns emptying the office trash bins.

Cathay will most certainly clear out HKE's HNA managers and middle management. Besides representing the previous shareholder, the nature of HNA's structure often held back HKE from efficiency and growth.

Hong Kong Airlines hopes HKE CEO, Li Dianchun, will return to HKA, where he was previously CCO and ran a tight organisation.

The industry wonders if the Hong Kong government will request that HNA use the proceeds from the HKE sale to pay off debt at HKA.

Cathay is putting feelers out for external CEO candidates with LCC experience, according to a source. Cathay declined to comment.

Observers believe Cathay needs a leader who has been part of a dual-brand strategy, understands the legacy airline mindset and can be a communicator, even reconciler, between LCC and full-service parent.

It is to be determined if Cathay dictates strategy to HKE or the two form a group to manage overlap along the lines of a Qantas-Jetstar "flying committee". HKE's large chunk of capacity to Tokyo and Osaka has weakened Cathay but those are also some of the most profitable destinations for HKE. Cathay may have marginal routes or planned destinations that would be better served by HKE.

Cathay will have internal debates about how to partner and manage the passenger experience between its full-service brands and HK Express. History shows interlines and codeshares to be obvious. HKE uses Navitaire, which will smoothly link to Cathay's Altea platform.

Cathay's scale – 181 passenger aircraft at 31 December 2018 – will help HKE, which has 24 aircraft. The single largest item is likely to be aircraft leases for which HKE often over-paid due to legacy inheritance or seeking fast growth.

There is often a negative connotation from a full-service airline adopting tactics from its LCC subsidiary, derided by the public as the "Jetstarisation" of Qantas or the "Vuelingisation" of British Airways. Yet this is typically due to passenger-facing cost cuts. Cathay could make these too, but there is much else for Cathay to improve.

Cathay recently started charging for seat selection for some economy fares. It is trialling pre-selection of business class meals and could extend this to allowing economy passengers to buy a premium meal. HKE has a longer and more thorough history of merchandising tied to knowing your customer and targeting more relevant offers during the booking process but also crucially after ticketing and during the trip.

Cathay's acquisition of HKE will be more complex than its takeover of then Dragonair in 2006. Cathay has been the acquirer but in coming decades Cathay may be the acquiree as Air China increases its stake. These growing links and combination of airlines, as well as Qatar Airways shareholding in Cathay, can be served by another HNA aphorism: "Harmony is the reason for groups to flourish." ***Positive progress report, page 16.*** ■


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Boeing's heavy hit from deadly 737 MAX crashes

At press time, Boeing had missed an April 1 deadline to deliver a 737 MAX stall prevention system software upgrade to the U.S. Federal Aviation Administration, saying it needed up to six more weeks to fully develop the fix. Associate editor and chief correspondent, Tom Ballantyne, reports on the fallout engulfing Boeing as it continues its "ongoing review" of the software changes.

As Boeing scrambled to introduce a fix to the anti-stall system blamed for the crashes of a Lion Air B737 MAX 8 last October and an Ethiopian Airlines jet of the type in March, the global aerospace manufacturer was pulling out all the stops to reassure customers and regulators that the jet would soon be returning to the skies.

As the April 1 deadline approached for a solution to the problem to produced, Boeing invited more than 200 airline pilots, technical leaders and regulators for an information session at its Renton, Seattle facility. "This is part of our ongoing effort to share more details about our plan for supporting the safe return of the 737 MAX to commercial service," said Boeing in a statement.

"We had a productive session this past Saturday and plan to reach all current and many future MAX operators and their home regulators. At the same time, we continue to work closely with our customers and regulators on software and training updates for the 737 MAX. Boeing is paying for the development of these updates."

It was a clear sign nothing was being left to chance to calm the frenzy of criticism aimed at Seattle in the wake of the

two 737 MAX crashes. The fatal accidents, coming so close together and involving such a new aircraft, were a body blow to Boeing's reputation.

Until the Ethiopian Airlines crash on March 10, the B737 series was the fastest selling aircraft in the company's history, with an order book of 15,000 since the aircraft type was launched in 1967.

The latest version, the MAX, has received more than 4,700 orders since 2011 and 370 of the jets have been delivered to 47 customers. The Boeing Company president, chairman and CEO, Dennis Muilenburg, quickly pointed out that since its certification and entry into service, the MAX family had completed hundreds of thousands of flights safely.

Yet the two accidents appear to have revealed a fatal flaw in the aircraft. The crashes, which took the lives of 346 passengers and crew, occurred minutes after take-off as the airplanes were climbing towards altitude. Under suspicion after the first accident was a new anti-stall system, MCAS (Maneuvering Characteristics Augmentation System), which was designed to bring the aircraft nose down if it detected the plane was climbing too steeply and was approaching a stall.

Apparently, if receiving false data from sensors, it can put the jet into a dive when it was, in reality, operating normally and climbing as planned. While it will be months before definitive reports on both accidents are completed, early indications from the Ethiopian crash indicated it was strikingly similar to the Lion Air accident of October 29 last year that took the lives of all 189 passengers and crew onboard.

The French Bureau of Investigation and Analysis (BEA) successfully extracted the data of the cockpit voice recorder (CVR) and flight data recorder (FDR) from the Ethiopian Airlines MAX 8 and sent the contents to Addis Ababa, where Ethiopian Transport, Minister Dagmawit Moges, announced in a press conference that "clear similarities were noted between Ethiopian Airlines flight 302 and Lion Air flight 610".

Part of the fix being offered by Boeing is a warning light for malfunctions in the anti-stall system. Previously this feature was available but was sold as an optional extra that neither Lion Air nor Ethiopian Airlines had purchased. It will now become standard on all MAX aircraft, warning pilots if the system was receiving false data.

The global grounding of its most popular jet hit Boeing hard. At press time, the company's shares had lost US$26 billion in value. The aerospace group faces potentially high compensation claims for the loss of crew and passengers onboard both aircraft, not only from the families of the deceased but from the two airlines that lost their aircraft.

The MAX was expected to account for more than 90% of planned year-end deliveries for Boeing. Several airlines are reported to be reconsidering their purchase commitments for the jet. So far, only one airline, Garuda Indonesia, has announced cancellation of its order for 50 of the type. Boeing sent a top executive to Jakarta to discuss the cancellation as the risk of losing customers to Airbus increases.

Asia-Pacific customers that operate or have ordered the MAX include Air China, BOC

Aviation, China Southern Airlines, Hainan Airlines, Malaysia Airlines, Shandong Airlines, Shanghai Airlines, SilkAir, SpiceJet, Thai Lion Air and Vietjet. At press time, the Vietnamese LCC, was holding fast to its order of 200 of the type.

In the weeks following the Ethiopian Airlines crash, the U.S. Congress joined the investigation into Boeing and the Federal Aviation Administration (FAA). The Senate aviation sub-committee will examine the process of the FAA's oversight procedures in the commercial aviation industry.

The country's Department of Transport (DoT) inspector general is conducting a separate probe into the FAA's decision to approve the MAX. As well as the country's politicians, the U.S. Justice Department is investigating aspects of the approval process.

Competitive pressure to build the jet, which permeated the entire design and development of the 737 variant, threatens the reputation and future profits of Boeing. Prosecutors and regulators are investigating whether the effort to design, produce and certify the MAX was rushed, leading Boeing to miss crucial safety risks and to underplay the need for additional pilot training for operators of the aircraft.

Several experts dispute this assumption. The MAX was launched in 2011 and did not fly until early 2016. It proceeded through a 2,000-hour flight test program and a 180-minute ETOPS testing that required 3,000 simulated flight cycles. In fact, the 737 MAX took longer to design and certify than any other 737 model or major upgrade.

Nevertheless, U.S. Transportation Secretary, Elaine Chao, formally directed an internal watchdog office to audit the certification process of the MAX, a decision announced amidst reports U.S. authorities had launched a criminal investigation into the certification of the top-selling jet. It will be conducted in part by the department's Inspector General's office, which completes audits and criminal investigations in conjunction with the Justice Department.

Both Boeing and the DoT declined comment about the inquiry. In a statement, the FAA said its "aircraft certification processes are well established and have consistently produced safe aircraft designs". It added the "737 MAX certification program followed the FAA's standard certification process".

Latterly, the FAA has shifted more authority in the approval process of new aircraft to the manufacturer. It has allowed Boeing to select many of the personnel who oversee tests and vouch for safety.

In recent months, the U.S. Congress expanded the outsourcing arrangements. "It raises, for me, the question of whether the agency is properly funded and properly staffed and whether there has been enough independent oversight," said Jim Hall, who was chairman of the National Transportation Safety Board from 1994 to 2001 and is now an aviation safety consultant.

The FAA's certification procedures are not the only issue that has attracted regulatory and political attention. Normally regarded as a global leader in reacting to a safety crisis, the FAA is being questioned about its delay in grounding the MAX fleet. It was two days behind the rest of the world, including China and other countries in the Asia-Pacific. Even then, it appeared the U.S. agency only acted after an emergency order was issued by U.S. president Trump.

The issue that cockpit crews flying both of the lost aircraft craft had not been trained to react safely when the aircraft's technology was not working also has to be addressed.

Boeing had been working on a software upgrade for the anti-stall system and pilot displays on the MAX since the Lion Air crash and also on updating pilot training. However, specific new pilot training was not expected to be defined until the software fix was in place. In other words, it had not been completed by the time the Ethiopian crash occurred.

Whatever the rights and wrongs of the accidents and several subsequent inquiries, Boeing's Muilenburg stressed in a lengthy public letter that "We have been working in full cooperation with the U.S. Federal Aviation Administration, the Department of Transportation and the National Transportation Safety Board on all issues relating to both the Lion Air and the Ethiopian Airlines accidents since the Lion Air accident occurred in October last year".

While current circumstances may hurt Boeing, most experts agreed there would be a fix and the MAX would fly again as the newest member of the 737 family. The B787 also was grounded following issues with batteries that ignited in flight and on the ground. Today, it is one of the world's most popular commercial aircraft. The critical difference is that no lives were lost from the B787's battery problems. ■

Boeing forced to delay 737 MAX installation of software fix

In the final week of March, Boeing released details of the intensive testing it has been conducting on the software update for the anti-stall system, the MCAS or Maneuvering Characteristics Augmentation System, suspected to be the root cause of the two fatal accidents at Lion Air and Ethiopian Airlines. A few days later, the company announced it would need up to six more weeks to present its fix to the FAA.

"In the simulator, pilots varied the angle of attack and airspeed to assess their effects on other systems in the airplane. In addition, the simulator operators programmed the simulator to simulate single and multiple errors or failures, subjecting the equipment to the most challenging scenarios," said Boeing in a March 26 statement.

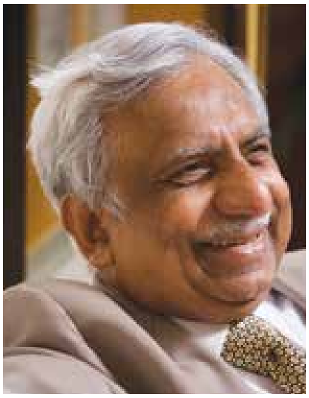
"The pilots worked with the software design team to incorporate multiple layers of protection in the event of sensor errors or other erroneous inputs. They assessed a broad range of piloting techniques to ensure normal airmanship skills are sufficient to control the airplane.

"The FAA participated in the evaluation. This cleared the way for installing the updated software on the airplane and provided a high level of confidence that it would perform as expected," Boeing said.

Pilots conducted a certification flight with the FAA on March 12th, when they demonstrated that the airplane with the updated software meets certification requirements.

Too little too late for Jet Airways?

The survival of India's Jet Airways is hanging in the balance as efforts to keep it flying stumble. Founder and chairman Naresh Goyal and his wife have been forced off the board, but they were only part of the problem reports associate editor and chief correspondent, Tom Ballantyne.



When Naresh Goyal, who founded Jet Airways 25 years ago, bowed to pressure and stepped down from the airline's board on March 25 it was a breakthrough in the complicated and often chaotic efforts being made to keep the full service carrier alive.

His coerced resignation and the reduction in his shareholding had been an insistent demand of potential rescuers of the carrier including Abu Dhabi's Etihad Airways. But nothing happens quickly in India and the once market-leading carrier, drowning in more than US$1 billion in debt, can't seem to find a solution to its woes.

With Goyal and also his wife, Anita, now without influence at the Mumbai headquartered carrier, the State Bank of India, the lead creditor of the airline, is to appoint an interim management team to run Jet.

The banks have agreed to swap just one rupee of debt for 114 million shares in Jet Airways, which gives them control. The banks have agreed to provide immediate funding of $218 million while they prepare to bring new investors onboard, a process the airline said should be completed by June.

"We believe it is in the lenders' interest, it is in the country's interest and the aviation sector's interest that Jet Airways continues to fly," State Bank of India chairman, Rajnish Kumar, told local media.

However there is still a problem - finding a new partner prepared to invest in a near bankrupt airline. Etihad, already holding 24% equity in Jet, was seen as a potential saviour, but it appears to have cold feet.

Under a potential deal, Etihad was expected to invest between $295 million to $350 million in the airline on the understanding Goyal would reduce his equity and resign as chairman.

Goyal has gone but in the meantime the Abu Dhabi carrier has reported a loss of $1.28 billion for its latest year, following a $1.52 billion loss twelve months earlier: a total of $2.8 billion of red ink in 24 months.

After being badly burnt by its investments in Air Berlin and Italy's Alitalia, will Etihad still decide to increase its investment in such a high risk venture as Jet? At press time, Abu Dhabi had not said if it would stay or go with Jet, especially as other factors had to be taken into account.

Flying operations are not going well. Approximately two thirds of of 124-strong fleet has been grounded because of late lease payments. Jet has cancelled all flights to and from Abu Dhabi, the headquarters of Etihad. The carrier's pilots are ready to strike because they are not being paid and the airline's share price has plummeted, standing at a quarter of its value of a year ago.

An unlikely White Knight is the Narendra Modi government. It came to power on a platform of supporting businesses such as airlines and it is now facing re-election. In such charged political times, it cannot afford to have a major airline collapse. Should it step in and bail Jet out, especially as it is trying to free itself from ownership of bankrupt flag carrier Air India?

Whatever happens, Jet faces another trying year in Indian and international skies. Increasing competition from LCCs, a weak rupee and highly taxed aviation fuel won't allow it to turn any financial corners soon.

Anyone who knows anything about India's airline market is aware the chances of Jet's survival are fading by the minute. Few of the informed in the industry are willing to wager money on its survival. ■

Asiana restructuring must finally deliver

Decade-long high debt has increased borrowing costs and precluded network growth.

By Will Horton

The ambulance siren is wailing at Asiana Airlines after an auditor disagreement saw accounts re-stated, the chairman departed and debt increases that triggered warnings. The questions are will the incidents be the impetus for long-awaited surgery at the carrier or will Asiana settle for more Band-Aid solutions to its problems.

Asiana has a second dilemma of balancing long-term strategy against creditor urgency. Asiana needs to grow and re-fleet, but CEO Han Chang-soo wrote to employees and said the airline would restructure by reducing routes and fleet size, with details to come. This would placate main creditor, the Korean Development Bank (KDB), a state-owned bank that often has rescued companies in the Kumho Asiana Group.

Chairman Park resigned after a disagreement with auditors saw Asiana stock suspended and accounts re-stated with higher debt and a lower profit. Chairman Park is said to want to show accountability for the audit issue and also other matters so confidence can be restored in Asiana, the business he most likes. Some caution this is for show, pointing to Park resigning in 2010 and then re-joining the company.

Asiana needs to end a spiral of high debt that increases borrowing costs, generating more debt. Parent Asiana Kumho had sold assets, even the headquarters building. Asiana said it may IPO LCC Air Busan amongst other asset sales.

Han's letter promised "bold innovation". Asiana is caught between needing to grow but not having the cash to fund it. Lessors are increasingly worried, spooked by failures at Skymark and TransAsia. Asiana's phase-out of Boeing aircraft is an opportunity for Airbus, but the airframer is worried its A350 and A380 may get caught up in Asiana's woes.

Asiana is said to need a new management platform, one that has a sobering reckoning to confront problems. Han's letter said there would be organisational restructuring, but Asiana's previous management overhauls had minimal impact.

Lacking the right structure will prohibit fully realising new growth and inhibit correcting past decisions. Asiana's network is over-weight on short-haul travel, where LCCs increasingly dominate. In only a few years, LCCs have come to fly more than half of the Korea-Japan market. Korea is seeing growth from Chinese airlines that are full-service but with lower cost bases. Seoul is expected to make LCCs the main beneficiary of forthcoming Chinese traffic rights.

Asiana's LCC strategy has not fully delivered. Asiana took only a minority equity position in its first LCC, Air Busan. That was typical of the time but has since limited Asiana's coordination. Asiana started a second LCC, Air Seoul, but the unit's cost credentials are questioned due to factors including low-density seating and embedded in-flight entertainment.

Long-haul is too small at Asiana. This limits local traffic opportunities and also the ability to re-balance short-haul flying by generating connections. Australia and New Zealand are small opportunities, but probably still under-served. Europe is a large growth market but mainly held back by Russian over-flight rights.

North America is a stronger market, despite competition. Korea has open skies with Canada and the U.S. Korean Air is showing early gains in its joint venture with Delta Air Lines. Korean Air made yield and load factor gains well above average and anecdotal remarks are complimentary.

Asiana could turn to fellow Star Alliance member, United Airlines, which is said to have had warm feelings for Asiana for a long time but was waiting for Asiana to realise the opportunity from further collaboration. The two expanded their codeshare in 2017.

Asiana's original plan for 2019 called for one passenger 747 and, also one 767 to exit the fleet while inducting four A350-900s, including one in storage in Toulouse. Fleet age also is weighed down by 777-200s and A330s.

Next-generation aircraft, which Asiana defined as A321neo and A350s, comprised 9% of the airline's fleet in 2018 but would grow to a 49% share in 2023. Istanbul would go from four to six weekly flights and Paris would be increased from five weekly to daily, subject to air traffic rights. ■

ALPHA

BRAVO

COLLINS

DELTA

ECHO

FOXTROT

GOLF

HOTEL

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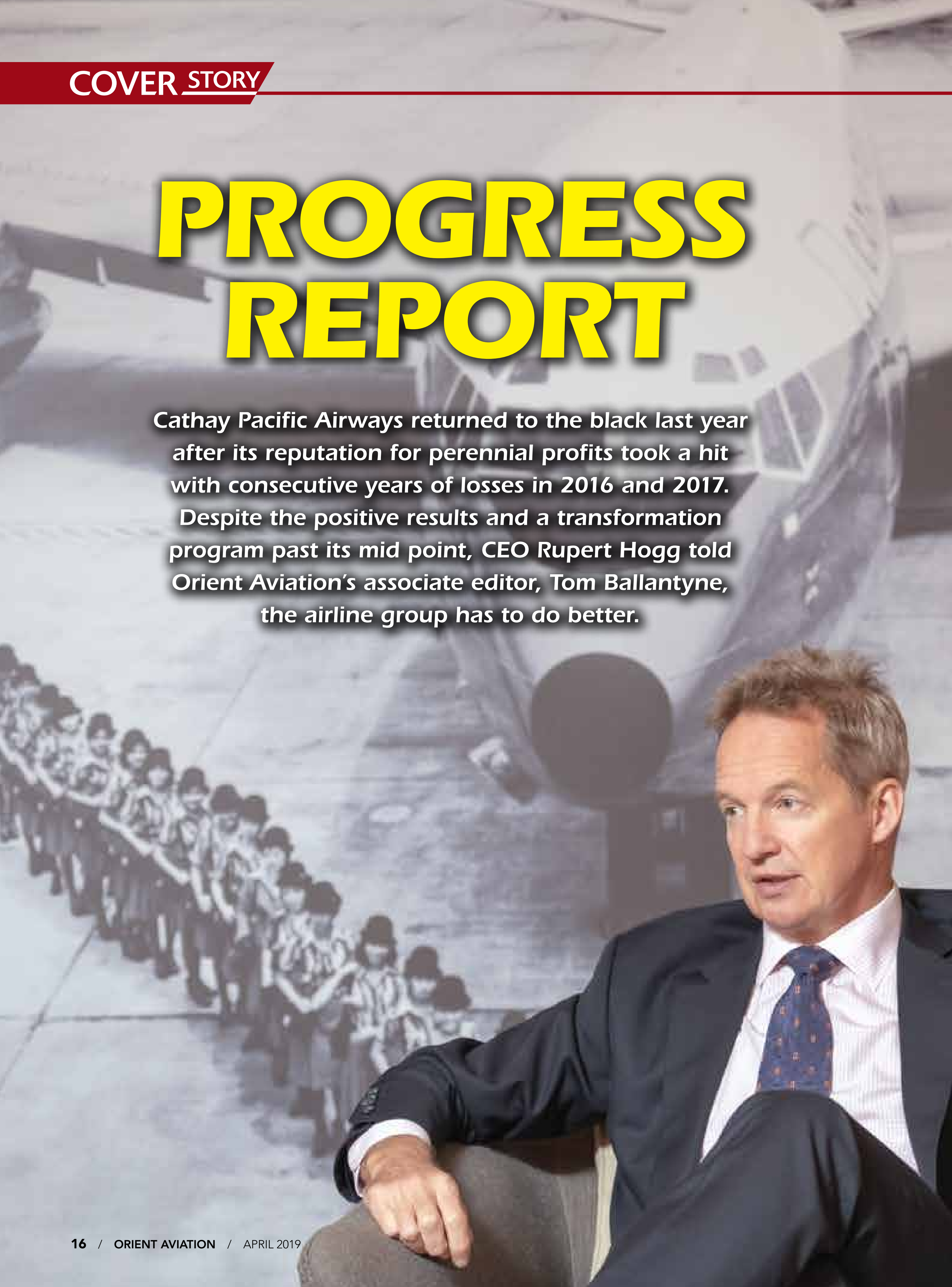
JULIET



PROGRESS REPORT

Cathay Pacific Airways returned to the black last year after its reputation for perennial profits took a hit with consecutive years of losses in 2016 and 2017. Despite the positive results and a transformation program past its mid point, CEO Rupert Hogg told Orient Aviation's associate editor, Tom Ballantyne, the airline group has to do better.

Cathay Pacific Airways may have surprised the market with better than expected financial results for full year 2018, but there was nothing triumphant about CEO Rupert Hogg's view of where the news positions the carrier after two years of losses. "It's good to be in the black and it's good to be in the black at the airline," he said.

However, the reality was the US$240 million profit was not a huge amount when more than US$100 billion was being invested. "Clearly, we want to do better and we've got plans to do better," he told Orient Aviation in Hong Kong last month.

Hogg, who took charge of Cathay in 2017, has not had an easy ride. The airline was in the doldrums, losing $73 million in 2016 and $160 million in 2017. High fuel costs, intense competition from low-cost carriers, rapidly expanding Chinese operators, expensive hedging miscalculations and Gulf airlines throwing capacity onto routes in the region took a toll on the Hong Kong carrier.

His task was to implement a three-year transformation program that included widely publicised big staff cuts, at head office and abroad, and the upgrading of the airline group's digital capacity at every level. That has been a challenge in itself, but there also have been Black Swan events that attracted negative publicity for Cathay at a time the carrier was attempting to "move mountains".

In September there was the bizarre incident of a new Cathay aircraft emerging from the paint shop with the livery of Cathay Paciic, an error that attracted global glee from the social media universe.

In late October the carrier announced that in March it had suffered the biggest cyberattack in the history of aviation. The enormity of the assault aside, the public was outraged that Cathay had kept the news of the hackers' efforts to obtain confidential information from them for almost eight months.

Then, at the turn of the year, first and business class tickets, mainly on routes from Vietnam to the U.S., were sold at economy prices. Cathay accepted the error and honoured all the tickets.

"There are two different orders of magnitude there," said Hogg. "People should not forget it was an illegal data breach. We had been doing a lot before the discovery of that but we have done a huge amount in terms of cybersecurity and data governance since then.

"It is really about making sure we are as secure as we can be and that we are watertight, having completely accepted we are in an arms race that's never going to finish. We can see what is going on around the world when big platforms like Facebook and Google get hacked. That was a really serious thing for us and we are really sorry about what happened."

The other two incidents were a different matter, he said. "These are cock-ups. Are they going to kill us? No. Are we smart enough to learn lessons to make sure they don't happen again? Yes. Have we done that? Yes.

"Will we have another cock-up somewhere else? I'm sure. It's just annoying and embarrassing and frustrating for

Cyber breach decision

Why didn't Cathay Pacific go public earlier with news of the cyberattack it suffered last year? CEO Rupert Hogg explained the number one obligation of the carrier was to understand who had been affected and in what way they had been affected.

"Because of the nature of the data which may have been accessed we were not even sure if it was readable (by the hackers). We worked with a whole lot of external experts to find out if it was readable," he said.

"When we discovered it was conceivable it was readable, we then had to do a whole lot to find out who might be affected and what data points of information might pertain to that. That's what took us the length of time.

"Could we have done that in a more compressed way? I think there are maybe a couple of bits where maybe the answer is, perhaps. If you look at the thrust of legislation in some jurisdictions like Europe the alternative is you have to tell people immediately about a data breach but we don't know what and in what way. I'm not sure how that is going to pan out as an effective measure. So, we're working with all the authorities and they are making inquiries with us, but that's about where it's at."

everyone who is working really hard that they happened in such quick succession."

Those events aside, Hogg has brought renewed vigour to Cathay, pushing ahead with re-engineering of the airline. "It is a three-year transformation and we are at the end of year two. If you think back about the drivers of that transformation program, about how we started it, we had three years of negative revenue growth which was clearly not a sustainable model on the passenger side," he said.

"So, what have we done? Well, the competitive strategy has been about growth and investment. The business goal has been to have a reasonable return on that growth and that investment. We believe Hong Kong is uniquely positioned geographically because you can do both coasts of the U.S. non-stop with existing technology. It is an advantage we have. We are about as far south as you can come in Northeast Asia and be able to do that.

"You can't do that from Singapore or Bangkok without some sort of technical trade off. We think that's a huge advantage. Hong Kong is the best connected of all the hub airports in this part of the world. We wanted to build upon that, keep building upon that. That's an ongoing strategy for us."

Even with pressure on its bottom line, Cathay is investing heavily in new aircraft and network expansion. "We put these plans into effect. We launched 10 destinations last year. We'll launch at least two this year and we also have increased the size of aircraft on the most popular timings to the cities we already serve. We have put more frequencies on as well. So, we are building that network," Hogg said.

He added its fleet of 213 aircraft, including 48 Cathay Dragon airplanes and 10 Air HK A330-600Fs, was designed not just to link big hub to big hub but to bring more services to several destinations that had not been joined to Hong Kong.

"The fleet acquisition is the second big part of the transformation plan. We are now at 32 A350s. They are making a great difference not only because they are joining all these places but because they are a great platform for creating an inflight experience and a customer experience in flight," he said.

"Before the third runway opens [at Hong Kong International Airport in 2023-2024] we will be taking another 70 aircraft. There is the remainder of the 350s, which is another 18 aircraft, then 21 B777-9X and of course from next year 32 A321neo." The neo will replace all the narrow-bodies at Cathay's regional subsidiary, Cathay Dragon.

Hogg said Cathay is taking the A350-900 particularly – it has 22 as well as eight A350-1000s – because it allows the carrier to join places that have never been joined to Hong Kong by non-stop journeys.

“Last year we did Dublin, Brussels, Washington and Copenhagen. We are now operating that aircraft to Tel Aviv, Barcelona and Madrid. All of these are new places on the radar for Hong Kong. We have Seattle from March. Every flight gives exponential permutations for connectivity and they are genuinely new sources of revenue for us,” he said.

Much has been written about Chinese airline international expansion that allows people who traditionally flew into China through Hong Kong to now fly directly to Chinese destinations. Hogg has a practical view on the trend.

“A lot of media become obsessed with a zero-sum game. Honestly, look at the numbers now versus 10 years ago. The International Air Transport Association’s (IATA) definition of the Asia-Pacific is 1.7 billion people travelling in 2019. By 2034, it’s going to be 3.9 billion. This Hong Kong hub handled 75 million people last year and we carried 35 million,” he said.

“So yes, more people will start going over Guangzhou or elsewhere or they may start going on non-stop services from Perth to London. But it’s not a zero-sum game to the extent

In terms of the business going forward, the critical issue was for everyone to understand it was about the competitive environment. “It is going to remain that way and we are just going to have to get more agile and more productive year on year. A lot of people think that sounds like management speak for cost-cutting but it’s not actually. It’s much more about productivity

Rupert Hogg
CEO Cathay Pacific Airways

that you win, I lose. It’s just the bigger picture of whether the infrastructure, collectively, will be able to accommodate the huge growth in travellers happening and going to happen.

“My view in that debate is Hong Kong is well positioned because you have a government that has invested ahead of the curve. We have the third runway coming up and we have a home-based carrier in the Cathay group that is investing heavily in aircraft to attract that growth. This gives three banks of connectivity that makes this hub really work.”

Hogg pointed out Hong Kong is the biggest hub in the world and it’s increasingly about being a gateway for the Greater Bay area. “We see that as a massive opportunity for us,” he said.

“When you look at the Greater Bay Area it’s clearly not going to be one size fits all, but there is a developed innovation hub - the Shenzhen corridor that extends north from Hong Kong - and this airport is rapidly becoming multi-modal.”

One example: there are eight ferry terminals in the bay area with the CX code, which means passengers from around the Pearl River Delta can check in at the terminal before boarding the ferry to Hong Kong International Airport.

“Let’s say at Shenzhen. You can check in at the CX terminal there. Your bags will go right the way through from that point. You come through on the ferry to the SkyPier at the airport, where ferries arrive from nine ports in the Pearl River Delta and Macao. You can continue straight through to your gate. So, it’s a seamless multi-modal airport and the numbers are really big now. They are moving huge amounts of people in a multi-modal way. That’s one point,” he said.

“The second point is the new infrastructure that is being built: the bridge that links Hong Kong to the Western Greater Bay Area of Zhuhai and Macao and then there is high-speed rail. All of these factors make Hong Kong airport more accessible. It is why we talk about it as a gateway airport and not just a hub airport.”

Hogg said these new links transform the

interconnectivity of these places and that while the bridge and the high-speed rail are the headliners, the authorities are looking at opening border crossings and making cross border journeys as seamless as possible.

Hong Kong's airport is congested but Hogg is confident the situation can be handled. "I think they (the Hong Kong government) can increase movements a bit all the way up to the third runway. They have said they've got plans to do that," he said. "From our point of view, we say we can grow at about 3%-4% ASKs every year until the third runway opens. We are quite comfortable at managing our way through to the third runway."

Operationally, Cathay faces similar challenges to other airlines across Asia. "You would have to say there's more uncertainty, it certainly seems, than last year," said Hogg. "There is the trade uncertainty, particularly between the U.S. and China. Discord creates uncertainty.

"For us on the passenger side, corporate uncertainty is really about business travel. Consumer sentiment impacts on propensity to travel and how often you travel. On the cargo side, volumes are definitely down but I would caveat that in a couple of ways. One is that clearly people over-filled their supply chain in the last quarter of last year. The second is looking forward in the first two or three months of the year is always difficult because Chinese New Year is a big distorter. All the factories shut down. It won't be as strong a market as last year."

Fuel remained Cathay's biggest cost, said Hogg, at about 30% of total expenses. Cathay has been hit hard by losses from hedging decisions in the recent past, and has adjusted its hedging policy. "We will never hedge more than two years forward and we will never hedge more than 50% of fuel consumed," Hogg said.

"The other hedge we are getting against the impact of fuel is those modern aircraft. It's interesting that fuel consumption dropped by 2% in 2018 over 2017 so given we grew 3% last year that is a really good story for us. It's reducing the amount of consumption but also the amount of emissions. These new aircraft make a huge difference in lots of different ways."

That included bringing new levels of comfort to customers. New aircraft attract new passengers, he said. "There are lots of different reasons for that. The first is they enable us to get to new markets. The second is they are very comfortable aircraft, very quiet, more humid. The cabin environment is very good," he said.

"The third factor is that in every class of the A350-1000 we have new business class seats, new premium economy seats and new economy seats. And through all of that we have new IFE and IFE is all about speed and resolution these days.

"The more modern your seat environment, the much better the IFE is, not just in resolution but in the quantity of content you can put out there. The new A350s are all WiFi enabled so that's a real benefit to people. We have now rolled out a retrofit program across all the long-haul aircraft which will be finished by 2020."

Maintaining company morale through bad financial times has been critical to the program. "We've had two years, particularly the first year, of real uncertainty. Everyone gets the need for change. There's a great innate fondness for the company so everyone wants it to succeed but they have to be convinced that the plan you are outlining has a reasonable chance of succeeding." he said.

"That's why, even though we are only two years into a three-year program, it is so gratifying to get back into the

Equipped for the job

Cathay Pacific's three-year turnaround program is not CEO Rupert Hogg's first experience of organisational transformation at the carrier. A little more than 20 years ago, when he returned to the airline from a six-year stint running Swire's diversified tea business, James Finlay Ltd, he led a team focused on restructuring in the turbulent post global financial crisis period.

He was appointed director of cargo in the same year, promoted to director of sales and marketing in 2010 and then chief operating officer in 2014. He took charge of the airline group in May 2017 when it was looking down the barrel of its first back to back losses in 71 years.

Hogg, 56, had started his career with Cathay Pacific in 1987 after graduating with an honors MA in history from Edinburgh University. Recruited in 1986 by Cathay parent, John Swire and Sons Ltd, he moved to the airline and Hong Kong in 1987. In the following 10 years he worked across the region and at the carrier's home hub in a number of management positions.

From 1998 to 2002, he was based in Australia, firstly on a two-year secondment as commercial manager at the Sydney office of John Swire & Sons Ltd and then as managing director of the parent's transport and logistics company, Kalari, in Melbourne. He moved to his native Scotland in 2002 where he ran the diversified James Finlay tea plantation business until he returned to Hong Kong and Cathay Pacific in 2008.

Hong Kong Express purchase

The other radical change on the horizon for Cathay Pacific is the acquisition of budget operator Hong Kong Express, which will allow it to enter a market segment it has eschewed for years. At the time of his interview with Orient Aviation, Hogg could not comment on the sale because talks were continuing on the now confirmed purchase offer. More than 20 low-cost carriers operate to and from Hong Kong. Cathay had long remained the only big full-service Asian airline without a low-cost subsidiary. What Hogg did say was it did not worry him to have to compete with LCCs. "It's just part of the competition we face and we have been competing with it quite successfully for some time really."

black at the airline level. The board definitely recognized that, so they said let's give everyone HK$2,000. Across a very large population of people it's about US$50 million and we only made US$240 million. It is a tangible acknowledgement it's a people business and the people have got us where we are today."

Micro-managing parts of the business and finding better ways to implement change has been critical to the program. For example, a cross-functional team employed lean methodology and digital tools to determine if meal wastage could be reduced. As a result, 47 tonnes of food and US$18 million was saved last year.

The amount of aircraft towing around the airport also was reduced because of a study. "We've been doing lots of stuff like that. If you add up all the initiatives, we have between 700 and 800 different initiatives going at any one time," Hogg said.

"Some make us more productive to the tune of a HK$1 million, some to HK$30 million. Others generate more revenue. It all adds up. In retrospect, one of the best things was not only to invest in new aircraft and the customer mindset, but to invest a lot in setting up a digital team, additional infrastructure and a lean team.

"The third foundation was shared services, where you take all the humdrum accounting processes in the different parts of the business and put them in one centre. It becomes a centre of excellence. Now we are starting to apply robotics in it so as we grow the business. We don't need to grow the amount of people doing that work."

Hogg said a lot of effort has been put into the digital side of the business. "We started at the get go and probably have about 50 people in our digital team. It is integrated through the [entire] business. A core tenet was the business had to say what the problem was that was trying to be solved," he said.

"So it was 'I want to reduce towing or I want to reduce meal wastage' or whatever. Then the digital team come in and help translate that into how to get the information and how to extract the data that will give the insight to solve that problem. Then the lean team comes in and teaches everyone the most efficient way to do the work," Hogg said.

As for the future, there is no doubt there will be challenges. "In terms of the macro issues that affect aviation, whether you are running a good, bad or indifferent business, oil has been rising again off its base. From our point of view, it has risen 30% against the previous year and has not dropped below its peaks in the last quarter of last year," he said.

"Secondly, the U.S. dollar has moved back into ascendency. We do better with a weak U.S. dollar because so much of our revenue comes from overseas. That's clearly a factor for us.

"Third is the issue of whether the world is more comfortable or more stable than last year. Clearly it's not. A trade deal between the U.S. and China would definitely calm things down a lot because it would be a positive.With all the macro stuff you need to be a delusional optimist to say it's probably a little less positive than it was last year but I don't see it being a train crash at the moment.

"The final point I would make is that anyone who makes any predictions in the first quarter is an idiot… and you can quote me on that."

Despite these challenges, Hogg said: "We clearly are going to grow. That will require big investment in fleet and will require us to get to a sustainable position in terms of return on capital employed. That will require us to be in a continuous state of improvement.

"In effect, what we are doing in phase two, and we are only about a third of the way through it, is redesigning the airline from the bottom up and asking where would technology combine with better data to allow us to really up our game, change our game and make us more productive but also create a better customer experience and a better employee experience. That will be ongoing. That will be a through train beyond 2019 when technically the three-year transformation program winds up." ■

NokScoot building North Asia network with SIA's 777-200s

NokScoot will aggressively develop a North Asia network while keeping costs down, CEO Yodchai Sudhidhanakul told Orient Aviation last month.

Michael Mackey reports

Medium haul low-cost carrier, NokScoot, will revive its North Asia expansion strategy with the arrival in the second half of this year of seven ex-Singapore Airlines B777-200s. Operating the aircraft cost efficiently will be a challenge, said the LCC's CEO, Yodhai Sudhidhanakul. They are "fairly aged" but he hoped that more fuel burn costs could be offset by higher seat density on the routes planned for the 777s.

At present, NokScoot operates five 777s, configured with 24 Scootbiz seats and 391 economy seats, out of the LCC's home base at Bangkok's Don Mueang airport. Sudhidhanakul, who was chief commercial officer of the LCC before taking on the top job, said: "obviously it gets better the more aircraft you have, the more economy of scale kicks in. It will have benefits".

This is good news for NokScoot because it had a bad 2018. Revenues rose 4.45% to 5,828 million baht (US$183.9 million) off the back of 1.16 million passengers. However, operating revenues increased by a much sharper 30.61% to 7,388 million baht .The net loss of 1,528 million baht was up dramatically on the previous year's 47.59 million baht

(USD1.5 million) deficit.

NokScoot has applied to increase flights to Osaka, which it already services 19 times a week, and to expand its Tokyo-Narita frequency from four times daily. It also intends to open Bangkok-Hokkaido, initially as a charter, and then build it to a daily route depending on demand.

"The next one is going to be Incheon. It depends on the [U.S.] Federal Aviation Administration (FAA)," Sudhidhanakul said. "Provisionally, the plan is for that service to open within this year. But we have had that expectation four years."

Japan and Korea are not so much new markets for NokScoot but a return to the original game plan of the airline when it was set up in 2014. The LCC's growth has been steady rather than spectacular since it flew its first international flight, to Singapore, in May 2015. Last December it opened Bangkok Delhi and in March it launched to Shanghai.

Establishing Korea and Japan as the linchpins of its network strategy halted when the FAA raised concerns about safety at Thai carriers and a red flag was issued against Thailand. "So we shifted to China," Sudhidhanakul said. NokScoot serves six Mainland cities: Shanghai (daily), Nanjing and Qingdao 14 times a week, Shenyang 10 a week, Tianjin daily and Xian six a week.

China remains fundamental to the LCC's growth with Chengdu, Kunming and Beijing on its radar. "It's fairly simple. You have to ask if there's demand for that particular city and whether you will be able to make it," Sudhidhanakul said. "And whether you get the traffic rights or the slots, but there are some external factors that are outside your control."

"There are always sustained challenges for airlines that are not specific to NokScoot," he said. They include the problems of all carriers – fuel costs, currency fluctuations, government regulatory constraints and infrastructure limitations.

He readily conceded the reputational issues, among them delays, poor standards and ownership tussles, that the LCC's Thai parent and 49% investor, Nok Air, has. "Nok still has problems, but Chinese companies and consumers do not do deep internet research about these issues," he said, but added Nok's reputation "might have some impact B2B".

His LCC has a unique proposition, Sudhidhanakul said, in that it combines Singaporean standards of safety, security and quality and the more intuitive hospitality of Thais.

"To me this is the most desirable combination," he said. Improvements at the LCC should make the airline more efficient but at the same time not robotic. "I am looking at the people that are working in the company to be on a journey," he said.

"I am trying to teach them. They should come here, learn, develop and move. My idea is to accept that fact. I believe that I should let staff go even if they are good. They should move on. Its a stage in life."

At press time, NokScoot and SIA Engineering Company announced a line maintenance joint venture based at Don Mueang airport that will be expanded to other key airports in Thailand. "The US$2 million investment is a significant milestone for us at NokScoot. It will help us provide faster and more reliable line maintenance services to support our growth plan," Sudhidhanakul said.

NokScoot's 49% shareholder, Tigerair Scoot, is a wholly owned subsidiary of Budget Aviation Holdings. Budget Aviation, in turn, is 100% held by Singapore Airlines. ■

Cutting edge technology revolutionises cabin design

Digitalisation's impact on aircraft interior trends is re-shaping airline cabins from the seat and WiFi-run IFE to the galley, the trolley and luggage storage.

IFE connectivity is the fastest growing sector in the industry with manufacturers and providers offering airlines customised content that delivers a high level entertainment experience to every passenger, including the visually and hearing impaired.

Cabin air is becoming cleaner and technology can produce water that has reduced bacteria content. Relaxation zones onboard are becoming more common as passengers demand walk around space on long-haul point to point flights.

Data analysts are putting solutions into the market that will allow airlines to understand how their passengers behave in real time in the cabin and to produce a flying experience that truly matches passenger expectations.

Seats, in particular, are having their moment in the cabin interior's sun. At the most Hamburg Aircraft Interiors Expo, recent Recaro Aircraft Seating outlined its Euros 65 million (US$73,08 million) R&D seating design investment because it anticipates a spike in demand for business class seats. Recaro said increasing numbers of passengers expect airlines to offer onboard "individualised living spaces" so it wished to be fully ready to answer "these market needs".

Recaro said first class demand will continue to decline and airlines will require a range of business class seats that will cater to each airline's premium cabin. It predicts privacy, connectivity and interactivity in an adjustable seating environment will become the norm. Each passenger will have personalised air conditioning and a mini-bar. Greater comfort and well-being will be a given for these passengers.

Also, as business class replaces first class more attention is being directed to the premium economy cabin with demand for seats in this category growing.

During Aircraft Interiors Expo, Adient Aerospace, a young joint venture between Boeing and car seat manufacturer, Adient, announced the launch of its lie-in flat business seat that will be on Hawaiian Airlines' 787-900 fleet from 2021. The Ascent Seating System for the Honolulu-headquartered airline will be a premium lie-flat seat configuration with double suites that allow families to share the experience of a flight – or alternatively offer privacy during a journey for the solo traveller.

To meet growing demand for passenger social zones onboard, Collins Aerospace is showcasing its new M-Flex Duet system. It transforms an aircraft doorway into a self –service meeting place or cabin attendant working area. Also in response to passenger expectations, Airbus will introduce larger overhead bins on the A320 fleet of American Airlines that will increase storage volume by 40%.

A welcome development in IFE and Connectivity are entertainment systems that cater for the visually or hearing impaired. Turbo prop manufacturer, ATR, is demonstrating its Audioback prototype to clients. It is a hearing aid loop designed to capture any audio input, including cabin announcements, that can be delivered to the hearing aid of a passenger. ATR also is exploring cabin improvements such as Braille safety instruction cards. ■

SITAONAIR signs with Taiwan's Starlux

Taiwan's long haul full service start-up Starlux has chosen the SITAONAIR's ONAIR WiFi portal to equip its planned fleet of A321neo and A350s. The Taiwanese airline, founded and chaired by pilot and former EVA Airways chairman, Chang Kui-wei, plans to begin flying in January next year.

Connected Cabin advances to development phase

Three European companies, gategroup, Stelia Aerospace and Recaro Aircraft Seating, have signed cooperation agreements with Airbus to develop an Internet of Things (IoT) platform for the aircraft cabin.

The Airbus Connected Experience will link, in real time, core cabin components including use of galleys, meal trolleys, seats, overhead bins and other cabin elements and also allow crews to exchange data throughout the cabin.

Airbus senior vice president cabin and cargo program, Soeren Scholz, said the Connected Experience is intended to link data from different areas of the cabin into a central system.The Connected Experience data can connect its trend analytics to Skywise, the group's global data analytics subsidiary.

Airlines will better understand cabin equipment usage trends, be able to execute predictive analytics across their fleets, provide wireless streaming for passengers and host third-party applications for movies with the Connected Experience.

The Connected galley offers a prediction of preferred food and beverages for passengers that will reduce waste as well as enhance passenger journeys. The Connected seat will give passengers personalised seat position settings, the benefit of remote ordering of favoured food and drinks from personal devices and customised entertainment and information. The Connected bin will show where space is free in an overhead bin and introduce advance booking of bin space.

Airbus said the Cabin Experience can be either line or retro fitted and will be first made available on the A320 family of aircraft. The platform will be fully compatible with Airbus Open Software Platform and be "Skywise ready"for data required for predictive maintenance.

First-in partners in the project represent catering (gategroup), aerostructures, cockpit and cabin seating design and manufacturer, Stelia Aerospace, and Recaro Aircraft Seating. Recently Recaro, which has a subsidiary in Qingdao, China, opened an Asia-Pacific hub in Hong Kong. ■

Passengers place high value on baggage tracking

When it comes to passenger baggage airlines have plenty of good news to report. By associate editor, Tom Ballantyne.

While the adoption of technology has improved passenger satisfaction across the airport journey, the biggest jump by far in the last year has been in baggage collection, IT and air transport communications leader SITA, said last month.

In its 2019 Passenger IT Insights study, it makes clear passengers are demanding more mobile services in tracking baggage and that where these are available, satisfaction levels surge.

"SITA's research shows 26% of passengers in 2018 used their mobile devices to receive status updates on their baggage at arrival, which was up from 14% in 2017. At the same time, there is a growing demand from passengers to receive more baggage information via their mobile devices," the Trends survey said.

A majority of passengers would definitely use mobile notifications that provided information on baggage at arrival, respondents told SITA. A similar number of those surveyed would use their mobile devices to track bags or report mishandled baggage.

Airline baggage systems and processes have reduced the annual rate of mishandled bags.

In fact, at a rate of 5.57 per thousand passengers, bags mishandled are recoding their lowest ever levels of loss or delay. Mishandled bags cost the industry an estimated $2.3 billion in 2017, a figure that encourages airlines to invest in cost-saving end-to-end bag tracking.

The SITA survey said travellers who tracked their baggage with a mobile device were 8.6% more satisfied than those who relied on traditional voice announcements or flight information screens to clear the carousel. Bags checked increased to 4.3 billion, or 1.2 bags per passenger, in 2018 compared with 1.08 bags in 2017.

"Today, airports and airlines are increasingly tracking bags at key points across their journey. Many airlines are offering some or all of this information to passengers as a mobile service, SITA director of baggage, Peter Drummond, said. "This service has a tremendously positive impact on passengers' airport experience by reducing anxiety around baggage."

Key findings of SITA's report were gathered from air passengers from 19 countries worldwide. ■

IATA launches new perishable cargo certification

International Air Transport Association director (IATA) general and CEO, Alexandre de Juniac, announced a new industry certificate, the Centre for Excellence in Perishable Logistics (CEIV Fresh), to improve the handling and transport of perishable products, at the World Cargo Symposium in Singapore last month.

Launch partners **Airport Authority of Hong Kong (AAHK), Cathay Pacific Airways, Cathay Pacific Services Ltd and Hong Kong Air Cargo Terminals Ltd (HACTL)** "took a community approach to developing CEIV Fresh recognizing that the successful shipment required the alignment of many stakeholders", said **IATA head of global cargo, Glyn Hughes**. "Shippers can have peace of mind knowing every entity handling their goods is operating to the same standards."

"We are delighted to be the first airport community worldwide recognized by IATA under the CEIV Fresh program. It is a big encouragement and affirmation of the capability of the Hong Kong airport community in handling perishable products," said **AAHK CEO, Fred Lam**. ■

Japan Airlines forms GDS joint venture and Satair A350 supply signs contract

Intended to target the specific travel needs of Japanese travelers, **Japan Airlines (JAL) and Travelport Worldwide** have created a joint venture Global Distribution System (GDS) from **Travelport Japan K.K.** and JAL's wholly-owned subsidiary, **Axess International Network**.

Combined, **Travelport Axess International** will provide the Japanese travel industry and its customers with access to GDS platform Axess, Travelport GDSs, Apollo and Galileo and New Distribution Capability (NDC) content. Travelport will be the majority partner in the joint venture with the new company to be formally established in June. Travelport Japan K.K. and Axess will continue to operate independently until a program of gradual integration commences later in the year.

JAL executive officer international passenger sales, Yoriyuki Kashiwagi, said: "We believe the future of travel will be transformed by technological innovation. I am confident that Travelport Axess will help Japanese travel agents respond to growing global demand by offering services based on state-of-the art technology."

"Through a forward thinking combination of Axess's local expertise and Travelport's API-based commerce platform technology we will bring greater choice and exceptional performance to our Japanese customers and travelers," said **Travelport chief commercial officer, Stephen Shurrock**.

Separately, JAL and Airbus subsidiary, **Satair**, have agreed to a multi-year end-to end supply chain package for expendable materials for the carrier's A350 fleet. The Airbus subsidiary said the service will commence in June after the delivery of the first of 31 A350s to JAL.

Satair introduced its Integrated Materials Service (IMS) in response to customer demand for a fully integrated expendable inventory, the company said. It is a customized solution developed in partnership with each Satair airline customer. IMS includes planning, sourcing, purchasing. logistics and inventory management.

"IMS combines its forecasting and planning activities worldwide with a customer's consumption data and Airbus OEM technical knowledge," **Satair CCO, Paul Lochab** said. "By purchasing large volumes, IMS provides competitive pricing. IMS commits to material availability of expendables and will reduce and stabilize JAL's total cost of ownership."

JAL executive procurement officer, Atsushi Maeda, said the "A350 will play an important role for JAL. We believe this agreement will provide safe operations at the highest level an opportunity to optimize our maintenance costs as well as enhancing our relationship with Satair". JAL has ordered 18 A350-900s and 13 A350-100s and also holds options for 25 of the type.

Satair is a global leader in the commercial aircraft aftermarket that supports the life cycle of an airliner with a suite of material management products. It holds exclusive or primary distribution arrangements with aerospace manufacturers and supplies parts to airline customers and third party MROs. ■

AIR TRAFFIC MANAGEMENT

Airways New Zealand and Leidos jointly promote new ATM technology

Air navigation services provider, **Airways New Zealand (Airways NZ)**, and global technology provider, **Leidos**, will jointly co-operate in seeking customers for future ATM platforms and associated products, through an agreement signed last month.

The two companies have been working jointly on the design and manufacture of the SkyLine-X ATM, a US$58 million system that will replace the New Zealand ANSP's two existing platforms. **Airways International CEO, Sharon Cooke, and Leidos vice president, Fran Hill**, said the most recent agreement laid the foundations for co-operation on several customer opportunities including a joint ATM flow management solution

In Singapore, **ST Engineering's** electronics division has developed **SERIS Airport Analytics** to maximize airport operations. It is designed to enhance airport operations with data driven and fact based decisions. It leverages advanced intelligence capabilities powered by machine learning and artificial intelligence to reduce air traffic delays and airport congestion at peak times. ■

Drone ship to shore deliveries forecast to cut costs by 90%

Airbus's **Skyways**, an experimental project intended to establish multi-modal transportation networks for smart cities, has commenced ship-to-shore trials with its parcel delivery drone, the first time drone technology has been explored in physical port conditions.

A **Swire Pacific Offshore** tug, anchored 1.5 kilometres from the shoreline received an onboard delivery of 1.5 kg of 3D printed consumberables from Singapore's Marina South pier. The delivery trip and return journey to land took 10 minutes.

During trials conducted with **Wilhelmsen Ships Services** the Airbus Skyways drone will take off from the South Marina pier with up to 4 kgs of cargo and navigate along designed corridors to deliver goods to ships up to three kilometres from land.

Deliveries of essential spares, medical supplies and cash to master via launch boat is provided day by day, said **Wilhelmsen Ships Services vice president commercial, Marius Johansen**. Drones can speed up deliveries by up to six times, lower costs by 90%, reduce emissions and mitigate against accidents, Airbus Skyways and Wilhelmsen said after the successful trial last month.

The Airbus subsidiary now plans land trials by delivering air parcels autonomously at Singapore National University. ■

Honeywell and AirMap develop drone tracking system

Global drone management platform, **AirMap**, and **Honeywell** will jointly develop a cost-effective device that will allow airspace safety authorities to track Unmanned Aerial Systems (UMS) or drones. The solution will maintain situational awareness of both manned and unmanned aircraft operations with a UAS Traffic Management System.

"The AirMap UTM platform is designed to provide a real-time operating picture of the airspace both for manned and unmanned aircraft," **AirMap chairman and co-founder, Ben Marcus**, said. "We have partnered with Honeywell to deliver an easy to use drone agnostic device as a practical way to start managing drone traffic in any environment today." The tracker device is available as a proof of concept for testing. The device will enable 4G and satellite connectivity to UTMs tracking drones. California-headquartered AirMap is the world's leading drone airspace management platform. ■

Thales and Singapore to develop open ATM system architecture

Singapore's Civil Aviation Authority and global communications group, **Thales**, have agreed to jointly develop an open ATM architecture system. It will provide greater flexibility to integrate modifications and upgrades to global ATM infrastructure at an accelerated pace compared with present time scales. Most commercial ATM systems need to take into consideration the compatibility and complexity arising from the integration with third party ATM systems, the joint venture partners said in March.

"We are the first Air Navigation Service Provider (ANSP) in the world to carry out such in-depth research and development of an Open ATM System Architecture, which will be a cornerstone of Singapore's future ATM

System," said the **Civil Aviation Authority of Singapore (CAAS) director general, Kevin Shum**. "it will enable Singapore to respond at an accelerated pace to the many changes in the aviation landscape.

"An Open ATM system also will benefit the ATM community and ANSPs who can tap into the research and architecture to level up their ATM systems and introduce improvements to them."

Thales executive vice president for land and air systems, Alex Cresswell, said: "We will only be able to manage the increasing complexity of aviation by using digital technologies. CAAS and Thales, as pioneers in the digital aviation field, will collaborate in developing the ATM of the future in the Asia-Pacific." ■

TRAINING

Malaysia's HM Aerospace expands ALSIM partnership

Simulator manufacturer, **ALSIM** has reached an agreement with long-term customer, **HM Aerospace (HMA)** to supply the company with a fourth simulator, an ALSIM AL250. The Langkawi-headquartered flight training academy, a member of the Halim Mazmin Group, can graduate more than 200 cadet pilots a year and is one of the preferred training centres for the Malaysia Airlines Group.

Already an operator of three ALSIM AL42 simulators, the addition of the AL250 will replicate all of the training academy's entry level aircraft. Thirty AL250s are in operation at flight schools worldwide for training on single and multi-engine piston systems. They meet all regulatory standards for small and mid-sized Aviation Training Organisations (ATO), flight schools and universities.

HMA, headed by retired Malaysian Air Force brigadier general, Dato RAnjit Singh Gill, has trained 1,00 commercial pilots for airlines across the region. ■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