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ORIENT AVIATION PERSON OF THE YEAR 2018

GOH CHOON PHONG
CEO
Singapore Airlines

DOING BUSINESS BEYOND TRADITIONAL AIRLINE BOUNDARIES

Goh Choon Phong debates incremental change versus ground zero overhaul at the airline group

Orient aviation 25 YEARS

China Southern Airlines abandons SkyTeam for American partner

Qantas "cloud cost map" to cut millions from group's fuel bill

Air New Zealand and ATR form venture to develop regional aviation

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CONTENTS

Volume **25**, Issue **10**

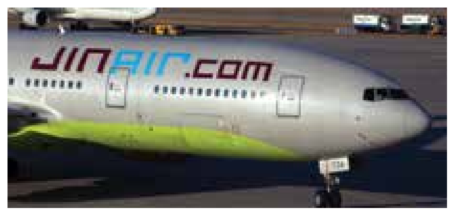
COVER STORY

COMMENT

ADDENDUM

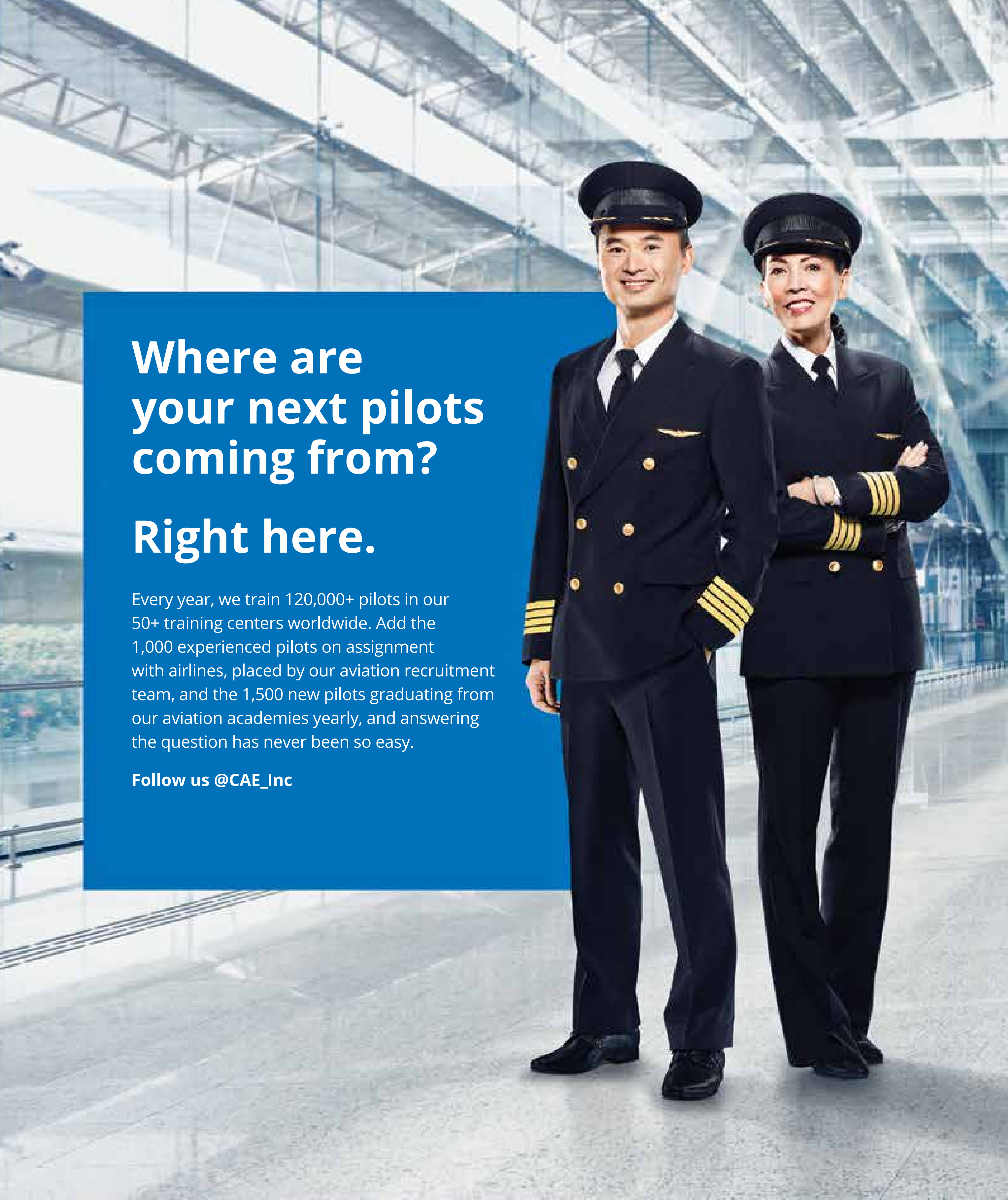
CHANGES IN 2018

Digital revolution takes hold at region's airlines



ALLIANCES

INDUSTRY ADDENDUM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Propping up flag carriers recipe for failure

It has been a challenging 12 months for Asia-Pacific airlines but as another year draws to a close there has been some recent good news.

Oil, which peaked at US$76 per barrel in October, dropped below $60 in November. It is does not approach the price of $40 in 2016 and $52 in 2017 and whether it is a trend in the volatile cycles of oil pricing is anyone's guess.

The downward shift in the oil price highlights the fact there are so many factors that challenge the ability of airlines to make a profit.

In 2018 those challenges were much the same as past years: increases in fees and charges, flight delays because of cramped, overloaded and ill-equipped airports and ATM systems, expensive investment in information technology and the cultural changes necessary to win and keep customers.

In this world successful Asia-Pacific airlines, whether privately owned or operated at arms length from government owners, have settled management teams that enjoy the confidence of their boards.

Most of the region's struggling carriers have their governments involved at a much deeper level of decision-making. In Malaysia, Thailand, Indonesia, India and Sri Lanka the performance of state-owned airlines has been poor.

There is a discussion to be had about the long-term viability of airlines rescued by governments and therefore usually controlled by those governments. For an airline to succeed, airline leaders must have the freedom to complete their transformations without being removed half way through the process because government owners don't like what they are doing.

Reputable forecasts point to a rich future for the region's carriers, both full service and low cost, but unless competent management teams are permitted to turn failing airlines around without outside interference, many of today's flag carriers will be no more. ■

TOM BALLANTYNE
Chief Correspondent
Orient Aviation Media Group

IATA's founding China boss retires

Baojian Zhang, a linchpin figure in the development of the **International Air Transport Association's (IATA)** airline member expansion on the Mainland retired this month after 24 years as its regional vice president North Asia.

Zhang joined IATA from the Civil Aviation Administration of China in 1994 when he set about establishing the global airline body's operations in China. Under his leadership, IATA membership on the Mainland has grown to 36 carriers, the largest concentration of member airlines of any country, an IATA statement said.

"In the last 24 years, our China team has grown from three staff to more 130 in 2018 and IATA's China BSP is the largest in the world, recording almost 190 million transactions in 2017," IATA said.

IATA director general and CEO, Alexandre de Junaic, said: "I thank Baojian for his 24 years of extraordinary service to IATA and to the airline industry. His achievements are impressive as is the well-established and strong team he leaves behind. The whole of IATA joins me in wishing Baojian all the very best for his well-deserved retirement."

Until a permanent successor is named, **IATA's regional vice president for the Asia-Pacific, Conrad Clifford**, also will lead IATA in North Asia, the association said. ■

Qantas "cloud" cost map to cut millions from annual fuel bill

Qantas expected to reduce its fuel bill by up to $40 million a year as a result of its new "cost map"; a revamp of its route planning system that took five years and a multi-million dollar investment to develop.

The Sydney Morning Herald reported earlier this month that the airline group was using cloud computing to crunch the data of thousands of possible flight paths and the factors they encounter during a journey to determine the most efficient route between destinations.

Put together in collaboration with the **University of Sydney's Australian Centre for Field Robotics**, the "Constellation" system was launched in October with several of Qantas's A380s, B747s and B787s. It will be installed across the entire fleet by year-end 2019.

Qantas head of flight operations systems, Allen Dickinson, told media the new system had delivered impressive results.

On a recent flight from Sydney to Santiago Chile, Constellation slightly diverted from the airline's B747 route to take advantage of a tailwind. It saved Qantas one tonne of fuel, Dickinson said.

"It's a subtle shift to pick up the wind. And that is the beauty of the system. It's just being able to find those subtle changes [in patterns] that we could not do in the old days of paper systems," the A330 captain said.

"The older system was almost like planning in your car. You just go left and right basically. The new system, built on work with drones, adds wings to your vehicle. It lets you fly in that dimensional space and go to different altitudes at different times."

Qantas estimates Constellation will reduce its fuel bill by close to one per cent a year, or US$40 million, based on the airline group's estimate of US$4 billion in annual fuel costs. ■

Malaysia Airlines fine tunes executive team

Malaysia Airlines Berhad, has announced the carrier's head of strategy and network, **Phillip See**, will take up the position of **CEO** of LCC, **Firefly**, on January 1, reporting directly to **MAB group CEO, Izham Ismail**.

See joined the airline from consultancy, **McKinsey and Company**, as the airline commenced its restructuring after the calamitous losses of two airliners and all passengers onboard in 2014. He also served in the turnaround office of the carrier in 2004 before it briefly returned to profit under the leadership of Idris Jala, now the CEO of his own global management consultancy.

On October 1, **Hasman Hilmi Sallahuddin**, who has held several positions at the sovereign wealth fund supporting MAB's restructuring, was appointed CEO of **Project Amal**, the unit responsible for profitably operating several of the carrier's A380s. ■

Virgin Australia edges closer to naming Borghetti successor

Three candidates have emerged as contenders for the position of **CEO of Virgin Australia Airlines**, a position CEO, John Borghetti, has decided he will not extend after his contract expires on January 1, 2020.

Local candidates are **Virgin Australia Airlines group executive, Rob Sharp**, who runs the day-to-day operations of the full service carrier and **Merren McArthur**, the recently appointed **CEO** of low-cost carrier**, Tigerair Australia**. If McArthur succeeds Borghetti, she will be the first female CEO of a full service Australian airline group.

Sharp moved to Virgin Australia from LCC Tigerair, where he was chief executive, in 2016. After a period of acting in the role he was confirmed in the position in November last year.

Former Lawyer McArthur has worked for the airline group for ten years. Her first job was company secretary with Virgin Blue. As the LLC shifted its strategy to a full service model, McArthur's new responsibilities sequentially included group executive alliances, network and yield management, group executive of Virgin Australia Regional Airlines and Group Cargo at Virgin Australia Holdings Ltd. She was named as CEO of Tigerair in May and formally took up the position in August.

In an interview with the **Australian Financial Review** in July this year, McArthur said "maybe' she had ambitions to run a major airline.

"I don't really have these lofty goals that I focus on. I focus on my current role. This is a big enough airline for me right now. But whatever opportunities arise, I'll grab," she said.

The third candidate for the top Virgin job is **Mark Dunkerley**. According to some media reports, the former CEO of Hawaiian Airlines, who stepped down earlier this year, is the board favourite as Borghetti's successor.

Media friendly Dunkerley joined Hawaiian in 2002 and was appointed CEO in 2005. A critical element of his strategy for the carrier's international expansion was a pivot to the Asia-Pacific.

In November last year Dunkerley announced he would not be renewing his contract with the Honululu-headquartered airline. His successor is Peter Ingram. ■

CHANGES AND CHALLENGES IN 2018

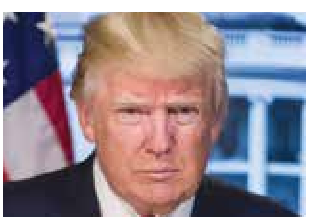
*In Asia-Pacific aviation in 2018, achieving digital transformation rapidly rose to the top of the agendas of the region's airlines, airports, ATMs and suppliers. Despite the complexity and the cost of incorporating advanced digital technology into their airlines, the shift to digitally based operations promises carriers lower costs, more accurate, real time applications of critical information and forensically targeted customer engagement. But the analysis and multi-billion investments required to implement digital blueprints across the industry were only one of the challenges that Asia-Pacific carriers faced in the last 12 months. Since January this year, fuel costs jumped, U.S-Sino trade tensions opened a fault line in the region's growth forecasts, problems at engine manufacturers were still causing costly delays in new aircraft deliveries and airports continued to crowd up. Some traditional alliance relationships have been severed and technology was reshaping aviation workforces. Several carriers have thrived but some have failed. The threat of cyber assault became real rather than predicted. Air passenger growth forecasts increased as the year drew to a close with China and India, fueled by low-cost carrier expansion, holding their positions as the two fastest growing aviation markets in the world. **Chief correspondent, Tom Ballantyne,** reports on another groundbreaking year in Asia-Pacific aviation.*

CREW SHORTAGES

EMISSIONS REDUCTIONS

CYBER ASSAULTS

VOLATILE FUEL PRICES



EAST-WEST TENSIONS

LOW-COST CARRIERS

SLOT SHORTAGES

MILLENNIALS EXPECTATIONS

At the Association of Asia-Pacific Airlines 62nd Assembly of Presidents in Jeju, South Korea, in October airline delegates passed resolutions to redress restrictive regulatory regimes that govern safety and cross border manpower demands, the retrogressive trend to a patchwork of emissions taxes and a commitment to fighting wildlife trafficking at airlines.

After a stellar accident-free 2017, the current year was heading in the same direction until the loss of a Lion Air B737 MAX in November, which took the lives all 189 passengers and crew onboard. Investigations are continuing into the cause of the accident.

In November, new International Civil Aviation Organization (ICAO) rules, that require all aircraft to be tracked at least every 15 minutes while in flight, came into force. The regulation was written in response to the still unresolved disappearance of Malaysia Airlines MH370 and all its passengers and crew over the Indian Ocean on March 8, 2014.

For airframe and engine manufacturers, 2018 has been witness to bulging order books that will keep OEM production lines humming for the next decade. Problems with new generation Pratt & Whitney and Rolls-Royce engines, and to a lesser degree those manufactured by joint venture CFM, are seriously delaying delivery of Airbus and Boeing aircraft to customers.

Nevertheless, new ultra-long haul (ULR) aircraft such as the A350 and the B787 are producing an ever shrinking world. In March, for the first time, Qantas Airways connected Australia with Britain when it launched its B787 Perth to London route. In October, Singapore Airlines (SIA) chose the A350-900 ULR to re-launch non-stop flights, after a five-year hiatus, from Singapore to New York.

Despite considerable industry scepticism, more long-haul low-cost routes have been introduced to the global network this year. AirAsia X, Scoot, Cebu Pacific and Jin Air have extended their operations to destinations including Hawaii and Europe.

Airlines investing in training centres include the first of two green field Qantas pilot academies in Australia, Singapore Airline's joint venture with Airbus and also with Boeing and CAE and the Thai International Airways partnership with Airbus in U-Tapeo south of Bangkok.

Asia-Pacific airlines transport an estimated 40% of the world's air freight. After a big spike last year, some heat has gone out of the market in 2018 which will be threatened if the trade war between China and the U.S. escalates.

All in all in the Asia-Pacific, 2018 has seen the best of the region's airlines shown out as they build the region's collective airline revenue. ■

Recognition and ruptures at the top

Early in the year, Japan Airlines (JAL) announced a major leadership transition, with chief executive Yoshiharu Ueki (65), the former pilot credited with leading the carrier's recovery post its humiliating bankruptcy, moved up to chairman of the board. Former chairman, Masaru Onishi, has retained a board seat. JAL managing executive officer engineering and maintenance, Yuji Akasaka, succeeded Ueki in April.

In Thailand, after a search of more than a year, Thai Airways International made a very unusual decision when it appointed government asset fund managing director, Sumeth Damrongchaitham, as the airline's president and CEO. He took up the position in August when he succeeded acting president, Usanee Sangsingkeo. Dhanarak Asset Development is 99.99% government owned.

Also in Thailand, Piya Yodmani walked away from his job as CEO of Nok Air after 11 months. Piya had served as deputy CEO at the LCC. His acting successor is Prajev Ongarsittigul, a Nok director and chairman of the executive committee at the airline.

A month later, Indonesia's Ministry of State-Owned Enterprises, which controls Garuda Indonesia, not only removed the carrier's president director Nugraha Mansyuri, who had taken charge in April 2016, but demanded six of the airline's eight directors follow him out the door.

His successor is Askara "Ari" Danadiputra, who had been Garuda's chief financial officer in 2016, but was more recently president of port operator Pwlindo III, another state-owned enterprise.

There was turbulence in China following the accidental death in Europe of HNA Group

co-chairman and co-founder, Wang Jian. Wang died when he fell backwards down a short hill as he was photographing a church in rural France. The group, struggling with billions of dollars of debt after a global investment spree, immediately announced colourful co-founder, Chen Feng, had taken full control of the Mainland aviation to services group and that his son had been promoted to a position of significant influence.

There were changes too at HNA subsidiary, HK Express, early in the year with the departure of expatriate CEO, Andrew Cowen, in what appeared to be a midnight coup. The LCC has significantly reduced its network this year.

Malaysia's long-haul budget carrier, AirAsia X, appointed Nadda Buranasiri as group CEO with the intention that he fill the seat of co-founders, Tony Fernandes and Kamarudin Meranun, with immediate effect. Buranasiri had been CEO at the Thai arm of AirAsia X since 2014.

To outsiders, the decision by 42-year-old Aditya Ghosh to step down as CEO of India's leading LCC, IndiGo, was a surprise. Whatever his reasons, his timing was good. The carrier continues to have issues with its OEM engine suppliers. The airline is being managed by the very capable co-owner of IndiGo, co-founder and Interglobe billionaire, Rahul Bhatia.

West of the Asia-Pacific, former big spending Etihad Airways is undergoing shrinkage under the leadership of Tony Douglas, the Etihad Group's CEO. Douglas replaced his senior management team including Etihad Airways CEO, Peter Baumgartner. The former Etihad airline boss is now senior strategic advisor on global partnerships and innovation at the group. All the group's divisions report directly to Douglas.

Following a family feud and a successful plot to unseat him as chairman of the Taiwanese international carrier, Eva Air commercial airline pilot, Chang Kuo-wei, is starting a new full service carrier, StarLux, in Taiwan. Time will tell if there is wisdom in his decision. ■

Asia-Pacific low-cost carriers maintain head of steam

If anyone thought the rush to launch Asia-Pacific airlines was losing impetus they should think again. At least seven prospective carriers have announced plans to launch in the next 12 to 18 months.

The biggest stampede to the region's runways is in South Korea, home base to six low-cost airlines.

South Korea's Transport Ministry confirmed last month four budget carrier applicants, - Fly Gangwon, Aero K, Air Premia and Air Philip - have applied for business licenses in response to a government initiative to add more LCCs to the nation's airline fleets. A fifth prospective operator, Guardians, was reported to be ready to progress to a licence application.

New regulations in South Korea require launch airlines to have seed funding of US$26 million and five aircraft before they can be granted an Aircraft Operator's Certificate (AOC). The previous requirements were $13 million and three aircraft.

At press time, Jeju Air ordered 40 B737 MAX 8 aircraft with options for ten more of the type. The deal, valued at list prices of US$5.9 billion, is the largest order to be placed by a South Korean LCC.

Elsewhere in the region, Vietnam's Bamboo Airlines has received its licence to fly and Air Astana has stated its intention to launch a subsidiary LCC, FlyArystan, mid next year.

Bamboo Air, a hybrid carrier, said its goal was to fly 100 routes, including to lesser-traveled destinations in Vietnam and elsewhere in Asia as well as North America. The airline's founder, FLC property to tourism tycoon, Trinh Van Quyet, said the planned airline had committed for 20 B787s, worth an estimated $5.6 billion and intended to spend another $3.2 billion on 24 A321neo.

Air Astana's new LCC will begin operations in mid-2019 with four A320s in an all-economy, 180-seat configuration. Chief executive, Peter Foster, said the fleet would grow to at least 15 airplanes by 2022.

Plans call for FlyArystan's network to serve new and present routes now flown by Air Astana. ■

South Korea is Asia-Pacific's fastest growing budget market

LCCs hold 55.5% of domestic marketing in South Korea, up 270 times compared with 13 years ago when the first domestic LCC flight by T'way Air was launched. The budget sector is making deep inroads onto international routes. A report from the Korea Transport Institute said LCCs in South Korea will see their international passenger traffic soar nearly 20% year in 2019, to 30.4 million passengers.

In the past five years, LCC performance in terms of international traffic has grown an average of 40% annually. "Budget carriers' rapid growth may continue in the coming year thanks to efforts to boost their international passenger traffic capacity by diversifying routes," the report said. In contrast, local full-service carriers are projected to suffer stagnant growth in their international passenger traffic.

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Alliances adjusting to new operating reality

More than two decades after they arrived on the aviation scene alliances are facing a shake-up. China Southern Airlines, the region's largest airline has, as expected, left SkyTeam in favour of a closer relationship with oneworld's American Airlines. In Doha, Qatar Airways is strongly signaling it will walk away from oneworld in 2019. Chief correspondent, Tom Ballantyne, reports.

When China Southern Airlines (CSA), the country's largest carrier, announced last month it would be pulling out of the SkyTeam alliance on January 1, it was confirmation of rumours that had been circulating in the industry since 2017.

Within the month, it was the turn of Qatar Airways to churn that same rumour mill. The outspoken group CEO of the airline, Akbar Al Baker, is believed to be ready to extract his carrier from oneworld because of souring relations with two alliance members, American Airlines and the Qantas Group.

No-one should be surprised at this turn of events. In the world of global airline alliances, sleeping with the enemy has become par for the course. It is increasingly evident that whatever the benefits of the unions, bilateral co-operation with non-alliance member airlines has become just as important, if not more so, than being in only one club.

In recent years, SkyTeam's CSA has been closely co-operating with oneworld's Qantas, which in turn has a serious relationship with non-affiliate, Emirates Airline. Star's Air New Zealand code-shares with oneworld's Cathay Pacific Airways. Star's Singapore Airlines co-operates with SkyTeam's Air France/KLM as does oneworld's Qantas.

Oneworld's American Airlines last year took a $200 million, 2.68% holding in CSA. Star's Air China owns 30% of oneworld's Cathay Pacific and oneworld's Qatar Airways holds another 9.94% of the Hong Kong-based carrier.

In essence, individual airlines are ready to co-operate with any partner that adds value to their businesses whether they are alliance partners or not.

So what's next? Will CSA join oneworld? Will Qatar join another alliance or return to independence like its fellow Gulf airlines, Emirates and Etihad Airways? Is there any truth in reports Cathay is weighing up resigning from oneworld?

Industry insiders postulate Qantas will strengthen its co-operation with CSA, perhaps with a joint venture that would encourage passengers to switch from Hong Kong to Guangzhou on the way to Europe.

CSA's departure from SkyTeam was "based on the needs of the company's development strategy and would better align it with the new trend of cooperation in the global aviation industry," it said.

"CSA would "explore the possibilities of establishing partnerships with advanced airlines, promote bilateral and multilateral cooperation and provide quality services to

China Southern and American Airlines deepen codeshare after SkyTeam exit

In November, following China Southern Airlines' long forecast announcement that it would exit the SkyTeam alliance on January 1, the Guangzhou-headquartered carrier signed an agreement with oneworld's American Airlines to expand their code shares and initiate other business partnerships.

The expanded code sharing, expected to be activated early next year, will cover the trunk routes flown between China and U.S. by both airlines, which could be as high as 65 flights per week during peak periods of travel. The two carriers also will introduce reciprocal frequent flyer benefits and lounge access for passengers in 2019.

China Southern Air Holding Company Ltd assistant president, Zhang Lin, said: "through sharing resources, our cooperation is market and passenger oriented and based on a win-win relationship."

"With the opening of Beijing Daxing International Airport in 2019, and the ability to cooperate fully with China Southern Airlines, we are incredibly excited about the airline's future in the Chinese market," American Airlines president, Robert Isom, said.

passengers around the world", it said. CSA president, Tan Wangeng, said in a recent Bloomberg Television interview there was potential to deepen ties with American Airlines – and it has.

The Civil Aviation Administration of China (CAAC) has granted CSA approval to establish Xiongan Airlines. It will be based at Beijing Daxing airport and is planned to operate a fleet of A320s on domestic and international routes. Speaking at World Routes 2018 in September, CSA's Tan said the carrier intends to increase its fleet from 800 to 2,000 aircraft by 2035 as it pursues its dual-hub Guangzhou-Beijing strategy.

At oneworld, Qatar's unhappiness has long been bubbling below the surface of the carrier's relationship with some oneworld members. The airline has not confirmed its departure, but Al Baker has said several times on the record that he did not see any point in the airline remaining a member of the oneworld alliance "when other partners see us as a threat".

He has publicly accused fellow alliance member, Qantas, of failing to act "in the spirit" of the alliance by lobbying against Qatar's request to operate more flights into Australia. The Doha-based airline flies to Sydney, Melbourne, Canberra, Adelaide and Perth from Doha and has been trying to gain entry to Brisbane.

The request has been stymied by Qantas, which has accused Qatar of dumping capacity and being "uncommercial and uncompetitive" by selling tickets at low prices. It pointed to research by a U.S. lobby group that claimed Qatar Airways has received more than US$17 billion in state aid and interest free loans.

"This distorts markets and threatens the sustainable operation of international carriers to Australia," said Qantas. The airline's CEO, Alan Joyce, said "nobody should be in an alliance where they believe its not working for them".

In his first public comments since the rift made headlines, Joyce said: "Our view has been very simple. We're after fair competition. This means that (airline) companies should be economically independent and not cross-subsidized by a government. "If aviation was governed by the World Trade Organization (WTO), there would be some dumping cases against people for going in well below cost to force people off routes and markets. We think those rules should apply to aviation markets."

Joyce said Qantas customers won't lose out if Qatar resigned from oneworld because its pacts with Emirates and Air France/KLM would replace any lost destinations served by Qatar.

"We've plenty of alternative mechanisms, which is the way our network is designed. People have a lot of choice on the Qantas-coded network to get to the same European points that they had by using Qatar."

Whether Qatar does leave oneworld remains to be seen. While the departure of Qatar would be a blow for oneworld, snaring CSA would more than make up for the loss. ■

DOING BUSINESS BEYOND TRADITIONAL AIRLINE BOUNDARIES

Singapore Airlines CEO, Goh Choon Phong, the 2018 Orient Aviation Person of the Year, puts forward fundamental questions about the depth of structural change his carrier must undertake to hold its place as a leading airline of the world.

Chief correspondent, Tom Ballantyne, reports from Singapore

The transformation program Singapore Airlines is undergoing, explained the carrier's boss, Goh Choon Phong, last month is forensically focused on building the best foundations for the airline group – and it could result in a complete change in the company's structure, he said.

"Of course, there will be specific challenges along the way. Fuel price is one of them as well as increases in capacity, whether from the Gulf carriers, the Chinese carriers or the proliferation of low-cost carriers (LCCs) in our market," said Goh (55).

"Do we do something incremental? Make short-term changes to address immediate concerns or do we look at ourselves more fundamentally and ask 'maybe we have to change the whole structure'?"

Since taking charge of SIA in 2011, Goh has been driving change unthinkable for the group a decade ago. He has built a powerful budget subsidiary by taking control of regional low-cost carrier, Tigerair, and merging it with Scoot, the group's 100%-owned medium to long-haul LCC.

He has led a multi-hub strategy by forging joint venture airlines in India and Thailand, launched a major digital transformation program and is investing heavily in the group's fleet and product to maintain SIA's reputation as a world leader in service innovation.

Goh also has been pushing harder on adjacent businesses to secure new sources of revenue. Examples include the joint venture (JV) Airbus Asia Training Centre in Singapore and another JV with Boeing and CAE, Singapore CAE Flight Training (SCFT). The Airbus venture, Goh said, is tremendously successful.

"We have more than 40 airlines from all over the world training with us. As we speak, we are considering how to expand further than we initially planned. It has become another revenue stream. That's the total purpose. This is part of our adjacent businesses strategy. We want to have some focus for growing revenue beyond ticket revenue," he said.

Now into phase two of its three-year transformation program, Goh said that "in this second phase, we are basically focusing on the core business. It is about how we continue to ensure we can establish ourselves as the number one market leader in providing customer service products to our customers".

While the market has been tough, with yields under pressure, SIA is making a huge investment in new wide-body jets. It has 25 A350-900s in its operating fleet and 42 more to come.

They will replace A330-300, B777-200, B777-200ER and B777-300 aircraft. The carrier was the launch customer for the ultra-long-range A350-900ULR. It has four in service with three more to be delivered. In October, the A350-900ULR variant launched the world's current longest non-stop flight, from Singapore to New York.

The carrier also was the launch customer for the B787-10. It has ordered 49 with seven of the type in operation. It has firm orders for 20 B777-9s that will commence arriving at the airline from 2022. Its current fleet of 115 planes includes 19 A330-300s, 19 A380-800s, seven B777-200s, six B777-200ERs, five B777-300s and 27 B777-300ERs.

Singapore Airlines digital blueprint

Singapore Airlines Group CEO, Goh Choon Phong, said there are four legs to its digital transformation:

* How to **create greater digital awareness** across the organization among all staff, including putting all staff through basic courses in digital appreciation and getting staff to initiate projects so there is hands on experience of how they can improve their work flow.

* **Upgrading and reinventing the airline's infrastructure** because being more flexible in data analytics requires a different IT infrastructure.

* **Creating new delivery capabilities**, which means more manpower both in business units and in IT. There has been more recruitment of necessary talent in data analytics, important for both the digital delivery of the IT applications and the business.

* **Creating an ecosystem** such that staff who are implementing and conceiving digital initiatives are able to collaborate with external communities such as start-ups and research institutions.

"We have ordered more than $50 billion worth of aircraft," said Goh. "New generation aircraft such as the A350 and B787 are our game changers. The A350 in particular, if you look at the size of the aircraft and the operating economics, has allowed us to finally grow in areas we could not have served with larger B777s.

"We have launched routes like Dusseldorf, Stockholm and now non-stop to Los Angeles and New York in a much more viable manner. That's a cost reduction measure in itself and an investment in the future. It is strategic because it is opening up opportunities for growth."

Non-stop Singapore to Seattle will be launched next September. SIA also is stepping up its airline partnerships, including joint ventures with Lufthansa and Air New Zealand and collaboration with other Star Alliance partners and non-Star carriers such as SkyTeam member, Air France/KLM.

"This again is about leveraging the combined strength of partners to make us more competitive by offering joint FFP programs, corporate access, more choices and better connectivity for our customers," he said.

As it progressively updates its fleet, SIA has not ignored the contribution of its flagship A380s to the airline. With 19 of them in the fleet - five of them recently acquired with a new cabin layout - it is spending $850 million reconfiguring the original 14 of the type.

"Because of new seats and a new layout, we were able to optimize the configuration with 471 seats. The program actually achieves two things," Goh said. "One, it provides the latest and best industry leading product across all cabins to all customers. We also saw the opportunity to optimize the real estate deployment and utilization that increased our seat

> We think we should be progressive. Generally, we are talking about the aviation and travel related space, but if something comes along where we can leverage our reputation and data base to be more relevant to our customers while also creating revenue opportunities, why not?
>
> **Goh Choon Phong**
> Singapore Airlines CEO

count by 14% to 15%. This is quite significant for any plane. We don't pack people in. We want to give people lots of room and comfort so they enjoy the flight with us."

SIA will not order more A380s, said Goh. It believed 19 were optimal for the fleet. "Clearly, there are airports that are slot congested. You can name quite a few, whether they are in China, London or even Sydney. We find it to be a useful aircraft for these dense, slot congested routes. At the same time, customers love it so again this is serving our passenger preference."

When it comes to the bottom line, cutting costs by slashing staff numbers is not what SIA does. "As an organization, we have been quite disciplined in managing our manpower. Our fundamental belief is our staff are truly our greatest asset in many, many ways," said Goh.

"The basic DNA is to want to serve customers. But as history has proven, continuing to innovate is very much part of what we have been doing. You just have to see how many firsts we have achieved in our history. And a lot of times we find these new things that we are doing in positioning the organization for the future require us to increase the number of people, rather than reduce them.

"Then the question is: how can we provide the kind of training, the kind of coaching that will allow our staff to transition into this new working environment? If you talk to our staff many are very excited about what is going on.

"They want to be involved. They can see they will be part of a new environment where they create new things and position the company for the next leg of our growth. This is important. Airline knowledge also is very important. The combination [of these factors] is what we focus on to grow rather than shrink the business."

SIA's portfolio strategy has seen the merger of budget carriers, Tigerair and Scoot, and the planned integration of full service subsidiary SilkAir into SIA. Retrofit work on the SilkAir fleet will begin in 2020, with the merger scheduled for completion in 2021.

It is possible now, said Goh, because technology and seat manufacturers are offering product that is closer to SIA aircraft interiors. The merged SilkAir will have an IFE system that is not part of its present cabins and will potentially have WiFi availability.

"With that kind of alignment in product and services we can rebrand and absorb SilkAir into SIA." It will, explained Goh, provide a lot more synergy. "Basically, it means the group will have two brands, Scoot and SIA, rather than four. We are sharpening the approach to this portfolio model. It will be Scoot for all the budget type services and SIA for all the premium services," he said.

"We have one single unit to look at all the planning, the group network connectivity. Scoot has Berlin and Athens. It covers a lot of the regional medium-haul destinations as well: Australia, Japan and certainly the Chinese cities. "Now it has within its fleet, because of the integration with Tiger, a sizeable narrow-body fleet."

Scoot's fleet is two A319-100s, 24 A320-200s with two to come, one A320neo with 38 more on order, 10 B787-8s and eight B787-9s with eight more to come. At press time, SIA announced the mainline carrier would take over Scoot's Bengaluru and Chennai services. Scoot will take over SilkAir's Laos route and its services to three second tier Indian cities and also to Kota Kinabalu and several Indonesian destinations.

The group's has two joint ventures; full-service Vistara with Tata in India and medium to long-haul LCC NokScoot with Nok Air is an acknowledgement by SIA that Singapore is not a big market compared with other countries.

Goh Choon Phong, 55, joined Singapore Airlines in 1990. After holding several senior positions including Senior Vice-President Finance, Senior Vice-President Information Technology and Senior Vice-President Commercial Technology and overseas assignments in China and Scandinavia, he spent four years as President of Singapore Airlines Cargo before becoming Executive Vice-President Marketing and the Regions in June 2010. He joined the airline's Board on October 1, 2010 and was appointed chief executive on January 1, 2011.

A board director of SIA Engineering Company, he is also Chairman of Budget Aviation Holdings, which owns and manages Scoot and is a member of the National University of Singapore Board of Trustees as well as an Independent Director on the board of Mastercard Incorporated. A member of the Board of Governors of the International Air Transport Association, he was the body's chairman in the June 2017 and June 2018 year.

A recipient of the Centre for Aviation's 'Asia-Pacific Airline CEO of the Year Award' in 2015, in 2016 he received the 'CEO Lifetime Achievement Award' from the Airline Passenger Experience Association as well as the 'Eisenhower Global Innovation Award' from the Business Council for International Understanding. He was also named the 'Outstanding Chief Executive Officer of the Year' in the Singapore Business Awards 2017. Goh holds a Master of Science in Electrical Engineering and Computer Science as well as three Bachelor of Science degrees in Computer Science and Engineering, Management Science and Cognitive Science, all from the Massachusetts Institute of Technology.

"Its geographic location does give us some advantage, but it also prevents us from tapping into certain markets. When we look at expansion and meaningful hubs outside Singapore, NokScoot was one of them for the budget business," Goh said.

"The choice of Bangkok is quite clear. It is the most travelled destination by visitors, even more so than Paris and London. It's been a great attraction for all kinds of travelers. The idea of setting up a JV based in Thailand that caters especially for the LCC market was an appealing one. It provides a twin hub for our budget operations, Singapore and Bangkok. They are attractive in different ways. Bangkok also is a great gateway into China."

Vistara is another vital component of the multi-hub strategy. "The potential of the Indian travel market is well known," Goh said. "Around 2024, India is expected to be the third biggest travel market in the world after China and the U.S."

Goh conceded the Indian domestic market was difficult at the moment, but he said: "if you look at it, the Indian domestic market and the Indian international market are quite different. The Indian domestic market is hugely competitive. People will move from one airline to another because of the slightest difference in fares."

Vistara's goal is "absolutely" to go international. "When we started Vistara it was a key consideration. Now, it is clearly recognized as the best airline in India for product quality and service levels. It is poised to serve the international market with a product and service offering that can compete effectively with international carriers," Goh said.

In July, Vistara ordered 13 A320neos and 10 B787-9s to extend the airline's premium services to international routes. It operates 21 A320s, eight of them A320neos. It plans to increase its fleet to 50.

"We continue to focus on how Vistara can grow," Goh said. "From an SIA perspective, we give it whatever support it requires. We are very glad our partner has a similar long-term strategic mindset when planning the airline's growth."

Goh said the mix offered by the group's carriers has been valuable. "We serve 29 points in China, which makes us one of the biggest, in numbers, of carriers serving China. And we have 14 points in India. That is the biggest, in the number of points, of foreign carriers serving India," he said.

"It would not have been possible had we not had an LCC in our portfolio. Many of these points are only feasible with an LCC because the traffic segment is more budget conscious. Scoot is about 40% cheaper relative to SIA, which gives us a lot more flexibility in serving different markets."

Beyond the nuts and bolts of airline operations there is an underlying but critical element in the re-engineering of SIA: the digital transformation needed to keep up with the fast changing world of information technology (IT).

Goh is no stranger to the computer world. He holds post graduate degrees in electrical engineering and computer science from the prestigious Massachusetts Institute of Technology. He said: "as part of our transformation, an overall theme is to create a very dynamic innovative culture within the organization. In the last couple of years we have been establishing a digital blueprint for the organization.

"We have put in place a way for us to connect our people to the start-up community, especially in this part of the world, so they can come in and co-create solutions with our people. This kind of cross-pollination is very important. It could potentially create business ideas and streams of revenue as well as allow our people and start-up communities to develop projects and products for travel-related businesses."

SIA's Kris Lab allows staff to work with start-ups with similar interests. "If they have any idea from any part of the group, be it Scoot, SilkAir, SIA, overseas or whatever, they have a collaborative platform to exchange ideas and experiment with concepts. If the idea looks interesting, SIA will give cash, no questions asked, to take it forward and prove its viability," he said.

SIA operates a central pricing system, which gives it great nimbleness in response to market patterns. Goh said. "We have implemented state of the art, I would say leading edge, revenue management systems, developed with the supplier.

Amadeus has provided us not only with the ability to do demand forecasts, but also the capability to accommodate a sense of elasticity of demand. It means you receive some direction or sense that if you were to change pricing how demand would be affected. Therefore, you can try to

Fuel bump hurts profits

Rising fuel costs weighed heavily on the Singapore Airlines group's interim financial performance despite solid progress in its three-year transformation program. In November, the group reported an operating profit of $426 million for the first six months of its 2018-2019 financial year, down 44.1%, or $336 million, from its $762 million result in the same period a year ago.

Group net profit declined to $196 million from $435 million, 68.9% lower than for the previous 12 months. The company said the decline was the result of a $379 million, or 20.4%, increase in fuel costs.

Higher oil prices offset a 5.8% rise in passenger revenue and a 7.4% lift in cargo revenue. The group's passenger traffic expanded by 8.8%, outpacing capacity growth of 5.4% and driving up passenger load factor for the group's airlines by 2.6%, to 83.6%.

The fuel burden was reflected across all airline operations. The mainline carrier reported its operating profit declined by $271 million, to $418 million. Regional subsidiary, SilkAir, reported an interim loss of $3 million, a reversal from last year's profit of $22 million. Budget subsidiary, Scoot, recorded an operating loss of $10 million.

The company said forward bookings were expected to be stronger year-on-year, but there were cost pressures arising from significantly elevated fuel prices compared with a year ago and keen competition in key operating markets.

Despite global trade tensions, cargo demand in the near term was expected to remain healthy during the seasonal peak, a group statement said. "Amid continuing challenges in the operating environment, the SIA Group remains committed to its three-year transformation program to enhance customer experience, grow revenue and improve operational efficiency. The program has been producing positive results in all of these areas to date."

optimize the combination of pricing and demand so that you optimize the revenue that occurs."

SIA is the first airline to make practical use of Blockchain technology, leveraging it to implement ways for customers to redeem their Frequent Flyer points by purchasing petrol at service stations or goods at supermarkets.

"We believe there is a lot more potential in it. We are making use of data analytics in the engineering field for predictive maintenance. We are using data analytics to look at recruitment and how we can enhance our recruitment process. We are looking at data analytics to offer a lot more personalized content for our customers. There are a lot of exciting things going on and many of them are ideas our staff conceived," Goh said.

Tapping into IT partnerships is part of the SIA transformation agenda. "You can imagine the Apples, the Microsofts, the Amazons or Alibaba where we could work with them. Recently, we announced some collaboration with them to see if we could achieve work on technologies and create applications together," Goh said.

"Related to that are research institutions, the universities where we have more fundamental issues that might require a few more years to think through and to develop solutions. Usually, these are deeper, harder problems. Deeper technology issues.

"These research collaborations will be another leg of the program. You will be pushing not just for an immediate application or implementation of an app, but examining fundamental issues that ask how we can leap frog to that place. There are a lot of things going on. For example, Artificial Intelligence (AI) applications in all areas of engineering."

All of this, Goh pointed out, is not just about saving money. "Cost efficiency is certainly one aspect of the situation. It also is about better productive efficiency and, very importantly, the opportunity to create lines of business, revenue generation opportunities and other business ideas," he said.

Like all airline chiefs, Goh realizes that while airlines are arguably the most important element of the value chain because they operate the equipment and transport passengers, they have the lowest margins compared with other sectors in the industry, including airports.

"We have been in that position for a long time. The value chain is not quite balanced. At the same time, it is what it is. Of course we want to see a better balance, but we have to deal with the situation. We have to assume we are able to grow in a sustainable manner despite the problems," he said. ■

Aireon creates customer affairs leadership role

U.S. headquartered global aircraft surveillance and tracking company, **Aireon LCC**, has appointed **Peter Cabooter** to the new position of vice president customer affairs. Cabooter, whose CV includes executive positions at **NAVBLUE** (previously Airbus Prosky) and Harris Corporation subsidiary, **Barco Orthogon**, will support Aireon's existing partnerships with Air Navigation Service Providers (ANSP) as well as signing up new air traffic management providers.

"We are at the precipice of one of the company's most important moments in its history," said **Aireon's CEO, Don Thoma**. "Being able to work with a company that is literally changing the entire air traffic management landscape is an honor. I can't wait to help usher in this next generation of air traffic surveillance," said Cabooter.

Vice president aviation services, Cyriel Kronenburg, will add the responsibilities of Aireon's regulatory, marketing product development, commercial data services and partner development acitvities to his portfolio.

On December 30, the final **Iridium NEXT** satellite will be launched from Vandenburg Air Force Base in California. Each NEXT satellite hosts an Aireon Automatic Dependent Surveillance-Broadcast (ADS-B) payload.

Sixty of the 65 NEXT Iridium satellites in orbit are operational. The launch in December will add 10 satellites and lead to Aireon going live with its air traffic surveillance system in early 2019. Real time ADS-B tracking will cover oceanic, polar and remote regions as well as augmenting existing ground-based systems that are limited to terrestrial airspace. ■

ATR and Air New Zealand explore future of regional aviation

European turboprop manufacturer, **ATR** and leading global carrier, **Air New Zealand**, will jointly explore the role of new propulsion technologies for regional aircraft. The partnership, announced in November, will investigate the development of new solutions and systems required to support future regional travel. ■

China's airports spend big on cybersecurity technology

More than 90% of China's airports and airlines will implement large scale cyber security programs in the next three years, reported **SITA vice president and general manager East Asia, May Zhou**, in a recent briefing paper.

Announced in Bejing, the SITA report said that in 2018 airlines will have spent 7% of their IT budget on cybersecurity and airports will have invested 18% of their information technology expenditure on enhanced cyber defences.

The recent **SITA Air Transport IT Insight** study analysed nine areas of cybersecurity to measure rates of cyber defence implementation. It reported that China's airports and airlines are ahead of their peers elsewhere in the world in detecting and defending cyber attacks.

"Digitilisation is top of mind for airlines and airports in China," said Zhou. "Our research shows that 100% of airlines and 95% of airports have digital transformation in place or are planning for it. It's encouraging to see the emphasis the industry has placed on cybersecurity in enhancing their IT development."

By year end 2019, 100% of China's airlines also hope to be 50% compliant with the **International Air Transport Association 753 resolution**, which requires that baggage is tracked at every point of the journey.

In two years, 100% of China's airports will have two of the four steps – the make-up area and loading stages – and 94% of them will be operating transfer and arrival tracking. As a result their fast implementation of resolution 753, China's airlines and airports lead the world in transforming baggage handling.

Upwards of 70% of Mainland airlines and 64% of the country's commercial airports participated in the survey, SITA said. ■

Boeing and U.K's ELG achieve breakthrough in carbon fibre recycling

Boeing, which is the largest user of aerospace grade composites for its commercial and defence programs, will partner with Britain's **ELG** carbon fibre to recycle aerospace grade composite for the manufacture of electronic accessories and automatic products.

The agreement covers excess carbon fibre from 11 of the company's manufacturing sites and will also include facilities in Canada, China and Malaysia.

Boeing Materials & Fabrication Director and Future Airplane Development, Tia

Benson, said: "We are excited about collaborating with ELG to leverage innovative recycling methods."

Until ELG developed the process to recycle "cured" composites used in aerospace manufacturing technical barriers held back carbon fibre re-use."Recycling cured carbon fibre was not possible just a few years a ago," said Benson.

Boeing and ELG conducted a pilot program to determine if the new technology could handle large scale recycling of excess carbon at Boeing's composite wing centre for the huge wings of the company's new B777X aircraft.

Over 18 months, the pilot program saved 1.5 million pounds of (681,818 kgs) of carbon fibre that that was cleaned and sold on to electronic and ground transportation manufacturers.

Based on the pilot study, Boeing forecast it can save excess composite materials, which will reduce waste going to landfills from Boeing factories by 20% in 2025.

Separately, Boeing and European aerospace conglomerate, **Safran**, will proceed with their joint venture to manufacture auxiliary power units (APU) after approval from the relevant regulatory authorities. The joint venture company will build and service APUs with initial design work to be done in San Diego, in the U.S. ■

Hong Kong takes honours with VR MRO training platform

Hong Kong-based joint venture, **China Aircraft Services Ltd (CASL)** has developed a virtual reality (VR) training platform for walk-around aircraft inspection.

The interactive platform, which is based the A320, provides trainees with a realistic and immersive apron environment for learning routine walk-around MRO airplane inspections in a virtual context.

CASL's CEO, Dr. Angus Cheung, said the MRO's VR training platform "resolves the limitations of external factors such as flight schedules, weather, potential personal injury and property damage on the apron".

"Trainees are exposed to defects – offered by the company's database – that are not commonly observed in everyday walk around inspections. It helps them for real inspections that allow no error."

The CASL joint venture structure is made up of the **China National Aviation Corporation Group Ltd (40%), United Airlines (20%), China Airlines (20%) and Gamma Aviation (20%)**. It provides aircraft line and base maintenance, cabin cleaning and ground support equipment and supplies at Hong Kong International airport.

CASL and China Eastern Airlines have operated **Shanghai Eastern Aircraft Maintenance Ltd (SEAM)** since 2002 at Shanghai Hongqiao airport and also Shanghai Pudong. ■

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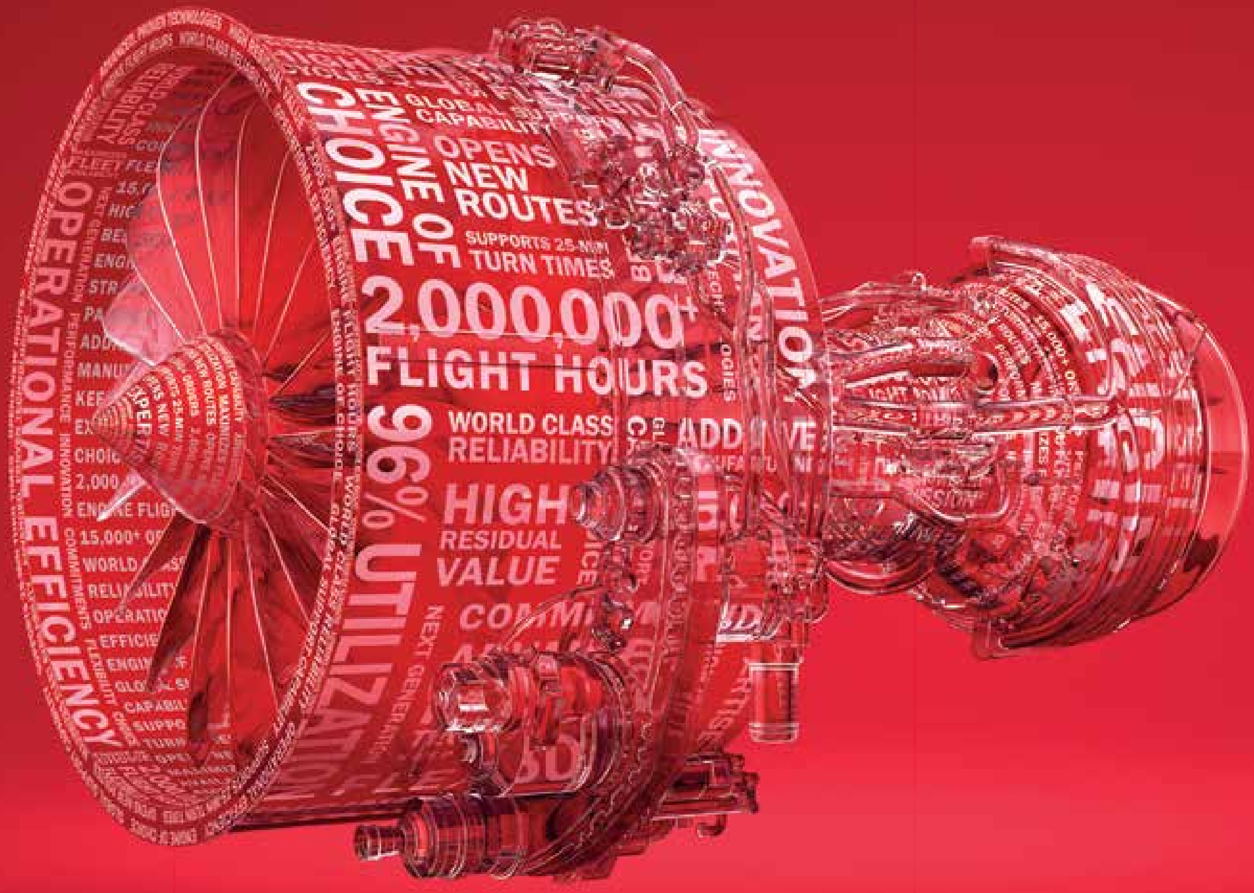
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