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U.S. open skies policy changing course?

Industry insight: innovation in global aerospace

Orient aviation 22 YEARS

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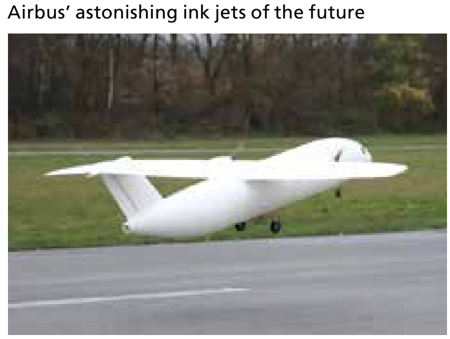

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U.S. barriers to regional airline expansion

As the U.S. presidential election approaches on November 8, an issue of concern for Asia-Pacific airlines is the fate of the Trans-Pacific Partnership Agreement (TPPA), a groundbreaking regional free trade agreement that was formally signed in New Zealand last February. Signatories to the TPPA were the U.S., Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, Peru, New Zealand, Singapore and Vietnam.

Republican presidential contender, Donald Trump, has said he will dump the TPPA if he is elected. Democratic presidential candidate, Hillary Clinton, favoured the TPPA when she was U.S. secretary of state. She changed her mind earlier this year to counter support that then rival Democratic candidate, Bernie Sanders, had garnered by opposing the TPPA.

Since then, the Democratic Party has voted against an amendment to a platform that would have opposed the TPPA, but said any trade deal must protect workers and the environment.

Asia-Pacific supporters of the TPPA regard it as critical to the region's economic growth - and therefore air traffic expansion. But there is a growing fear, exemplified by the visit to Washington DC by Singapore prime minister, Lee Hsien Loong, in August, that the pact won't be ratified by President Obama and that it won't see the light of day after he departs from office.

Adding to the uncertainty about future U.S. trade policy are indicators that U.S. aviation regulators are being pressured by special interest groups to roll back the open skies aviation policy the country has pursued for years. Open Skies critics in the U.S. believe the policy threatens American jobs and puts undue pressure on the big U.S. carriers, despite their booming businesses.

Examples supporting the changed U.S. position are attempts to halt the accelerating capacity foreign airlines, particularly from the Middle East, but also from Mainland China, want to put into North America. As well, discussions on an open skies treaty between the U.S. and China have stalled, with no resolution in sight.

Another indicator of a changed U.S. approach to liberal skies is the U.S. Department of Transportation's (DoT) lengthy delay in approving the joint venture between Qantas Airways and American Airlines. Australia and New Zealand have approved the partnership, but it is felt the U.S. is holding off consent until the country's aviation bureaucrats know who their president will be.

While no one wants to overreact to these separate sets of circumstances, if it is true that the U.S. is beginning to re-regulate to protect its own airlines, then it would hardly be surprising if other nations did the same, including countries where U.S. carriers either do good business or where they want to build their businesses. And that includes the Asia-Pacific.

In an era where airlines are seeking more freedom to operate across borders rather than less, a new wave of U.S. aviation protectionism would be a grim prospect indeed, particularly if airlines in the world's largest future market decided to retaliate against a retrograde U.S. aviation policy. ■

TOM BALLANTYNE
Chief Correspondent
Orient Aviation Media Group

What is today’s best aircraft investment that ensures profitability?

airbus.com

No more excuses warns THAI boss

Thailand remains Europe's favourite long-haul getaway. But with Middle East airlines putting evermore flights into the kingdom and beyond and short haul budget airlines building market share at the expense of the country's flag carrier, Thai Airways International (THAI) president, Charamporn Jotikasthira, might sometimes wish he was back at his old job running the country's stock exchange.

This month alone, Emirates Airline added a seventh daily A380/B777 frequency into Bangkok's near-capacity Suvarnabhumi airport and fellow Gulf carriers, Qatar Airways and Etihad Airways, have maintained a high frequency schedule of four times a day services to the Thai capital, as well as flights to resort destinations of Phuket.

At the most recent Star Alliance CEO conference in Zurich, Charamporn conceded to Orient Aviation that there were problems for THAI when it came to completing its three year structuring program.

"Last year we had the excuse of grounding so many aircraft. We had to reduce everything, but this year we have to benchmark against the world's best," he said. THAI is investing in a new web booking engine and an up-to-date IT system and is upgrading a very uncompetitive premium cabin.

In tandem with the closing down of loss-making routes to Los Angeles, Johannesburg, Moscow and Madrid, the airline has sold 25 of the 38 aircraft it grounded as part of its turnaround plan.

"Definitely, we have to reduce the number of [aircraft] types," he said. When Charamporn arrived at THAI there were 11 types. "It's supposed to be only five or six" going forward, he said.

Nevertheless, THAI will commence accepting its twelve on-order A350-900s from August, despite the fact the airline said it did not need them and that they were "way, way prior commitments". He said the orders were "difficult to exit economically".

If he could turn back time, THAI would not have ordered the 12 A350s and six B787s, he said. "We should have bought 20 or 40 aircraft at a time, for economies of scale, rather than six and twelve, which is in nowhere land." The A350 will replace older B777s, Charamporn said.

In 2014, THAI had a cabin load factor of 68.9%. The goal this year is 80%, to be achieved with more rational capacity

Lucrative days for business class numbered says Emirates boss

Corporate long haul travelers would migrate to cheaper seats and "high end stuff is not going to come through as it did in the good old days", Emirates Airline president, Sir Tim Clark, told the *Financial Times* at the International Air Transport Association's (IATA) annual general meeting last month.

"I see a change in the way corporate travel is going to develop, which will, of course, affect our yields," he said. He repeated that the Dubai-headquartered airline was considering the introduction of a premium economy cabin into its fleet. "We are mapping out where we think the market will go. We have to recognize that things are going to be slightly different for the mix," he said.

Airline yields have continued to decline this year, with some carriers in the Asia-Pacific reporting a drop of 13% for the last six months. Air fares are expected to fall by a global average of seven per cent in 2016, but passenger volume will increase, IATA has predicted. "We are going to be there [for a long time] on these fare levels," Clark said.

In a recent Oxford Economics study, Chinese travelers, already the world's biggest spenders when they travel, are forecast to double their spending in the next decade. Outbound Mainland travelers whose household income exceeds US$20,000 per year, spent $137 billion in 2015. This figure will increase by 86%, to US$255.4 billion in 2025, said the study. ■

China's home-grown ARJ21 finally takes off

After a 14-year program and so many delays that it no longer matters, China's Asian Regional Jet for the 21st century, the ARJ21-700, made its maiden revenue flight with launch customer, Chengdu Airlines, on June 28. The aircraft, carrying 70 passengers, flew from Chengdu to Shanghai's Hongqiao airport and return, a service the western Chinese airline said it would operate three times a week. It also will fly the aircraft to Shenzhen, Nanjing and several smaller cities in western China.

The ARJ21 is China's first homegrown jet aircraft and is aimed at China's domestic airlines. It was developed to compete with global aircraft manufacturers, particularly Canada's Bombardier and Brazil's Embraer. China also has a full size jet under development, the C919, with an eye to taking some of the future market share of Airbus and Boeing in China and elsewhere in the Asia-Pacific.

The Civil Aviation Administration of China certified the ARJ21 in late 2014. Development of the jet started in 2002 with the aircraft scheduled to make its maiden flight in 2007. It is equipped with many components that are the same as those built for the McDonnell Douglas MD-80 and Douglas DC 9 airliners.

Chengdu Airlines, which is expected to receive two more ARJ21s this year, received the aircraft from its manufacturer, the Commercial Aircraft Corp. of China, last November. It has orders for 30 of the aircraft. ■

management, more efficient sales and marketing and better network planning. "Above 80%, and we'll make a profit for sure," he said, but admitted "this year will be a tough one".

The airline has tweaked its schedule to offer better hub connectivity to 28 cities, particularly between Europe and Australia, once the carrier's bread and butter. Also, Charamporn said, Thailand's airport authority had allocated concourse C at Suvarnabhumi exclusively to THAI. The airline will redecorate the area "THAI Airways style", and "manage our own aircraft better", the president said.

Charamporn believed THAI will always be a hub carrier, although several new airlines are serving the country's secondary cities point to point. "Mind you," he said, "we have Nok Air, so we can use it for this." He said recent media reports that claimed THAI would sell its 39% equity in the LCC were "false".

Regionally, THAI intends to develop partnerships with as many as ten airlines in ASEAN (Association of South East Asian Nations) to counter the recent advent of the LCC alliances, Value Alliance and U-Fly. Long haul, he would like to add Seattle or Vancouver to the carrier's network, using the A350 or B787, when Thailand regains its Federal Aviation Administration Category 1 certification.

He said Chicago and New York, where alliance partner, United Airlines, is strong, remain on THAI's radar. At press time, the 56-year-old airline had announced a four-weekly return to Moscow and a new three times a week service to Tehran from November. ***By Dominic Lalk in Zurich.*** ■

Thai billionaire and Leicester City team proprietor expands empire to Thai AirAsia

Fifty eight year old Thai duty free tycoon, Vichai Srivaddhanaprabha, whose Leicester City Football team won the 2016 English Premier League, has added a substantial holding in a local LCC to his portfolio of airport retail outlets, hotels, polo tournaments and top league English football.

The billionaire owner of monopoly duty free concession, King Power, at Bangkok's major airport, Suvarnabhumi, paid US$225.8 million to Tassapon Bijleveld for 39% of Thai AirAsia. Before the latest transaction, the Bangkok-based LCC was 55% owned by Asian Aviation, a company controlled by Thai AirAsia CEO Bijleved, private investors and Tony Fernandes' AirAsia Group (45%). Bijleveld will retain a five per cent share of the carrier. Thai AirAsia is one of the more successful AirAsia Group franchises.

Vichai has a huge public profile in Britain after his previously under-rated football team, "The Foxes", overtook the titans of English football to win the Premiership league trophy this year. Vichai, who bought Leicester City in 2010 for US$58 million and is a genuine football fan, is no retiring tycoon. He divides his time between Bangkok, the family's west London home, a Berkshire polo estate and Leicester. He often travels by helicopter to watch his team play, along with his son, Top, the vice chairman of The Foxes and a serious polo player. Last year, the King Power Foxes polo team won the Queen's Cup and the Gold Cup.

A Buddhist with an estimated US$3 billion fortune, Vichai has remained true to his Thai heritage despite his globetrotting existence. Before he made his decision to appoint Claudio Ranieri as his football team's coach 18 months ago, monks from the Wat Traimit Withhayaram Woraviharn (Golden Temple) in Bangkok had to agree to the decision. The temple's monks are regularly flown from Thailand to Britain to attend Leicester City games and bless the pitch. ■

CEO-designate says Star Alliance offers value to airline joint ventures

Jeffrey Goh, 47, a distinguished aviation legal academic and latterly Star Alliance's chief operating officer, will succeed Mark Schwab as the Frankfurt-headquartered alliance's CEO in January. Goh joined Star in 2007 from the International Air Transport Association and had previously worked at leading aviation law firm, Beaumont and Son, as well as lecturing on public and aviation law at Sheffield University in Britain. Speaking at the most recent Star Alliance CEO meeting in Zurich last month, Orient Aviation's **Dominic Lalk** *asked Goh about the impact of joint ventures on alliance partnerships. They are "a phenomenon that is not going to go away" so Star will have to find a way of co-existing with them, he said. "We have a role to play, particularly the technology support we provide. There is a future and continuing relevance to support our joint venture partners."*

Asia-Pacific airlines in the 28 airline alliance are Air China, Air India, Air New Zealand, All Nippon Airways, Asiana Airlines, EVA Air, Shenzhen Airlines, Singapore Airlines and Thai Airways International. ■

THE INVISIBLE FOE

When leaders of the world's airlines gathered in Dublin last month for the annual general meeting of the International Air Transport Association (IATA) security took centre stage, as experts warned fighting cyber assault and terrorism will only become harder.

TOM BALLANTYNE reports

Dark agents or hackers should be industry friends rather than foes when setting up systems to fight aviation cyber assault and terrorism, security experts said at the recent IATA annual gathering of air industry leaders in Dublin.

Think like a hacker not a defender, they said, when building IT defences against digital destruction and breaching of airport and airline security by terrorists. Dark agents are really "effective agents", they believed, because they often identify a company's greatest vulnerability.

"Most of us agree. The problem continues to worsen," said security futurist and risk consultant, Dr. Simon Moores at the SITA summit in Barcelona in the week leading to the IATA annual general meeting and World Air Transport Summit.

"In fact, it is much worse if you measure the impact in 2015 alone. Criminals are finding new ways to reach the end point, wherever that may be, as more applications migrate to the cloud and become available through portable and smart devices. In 2016, it's not just about if we are going to be hacked, it's about when," he said.

"We are recognizing - and it is very well documented that cyberattacks are probably precursors to one of the worst threats to our industry and that is a physical attack," Faye Francy, leader of Boeing Commercial Airplanes Cyber ONE team, told SITA delegates.

"Hackers access data that contains personal information about who's flying when, where, how and why. They can take that data and use it against us in a potential attack.

"Incidents across the world indicate the need for us to come together as an industry and recognize that there are potential vulnerabilities," said Francy, whose Cyber ONE team was a leader in establishing the public-private partnership, the Aviation Information Sharing and Analysis

Centre (A-ISAC). A-ISAC's goal is to increase intelligence and information sharing on threats.

At IATA in Dublin, the association's outgoing IATA director general and CEO, Tony Tyler, said: "Our electronically connected world is vulnerable to hackers bent on causing chaos. We are all vulnerable and there is no guaranteed way to stay a step ahead."

Real time collaboration and information exchange between industry and governments in the issue is critical, he said. "Make no mistake. We face real threats. Governments and industry must be nimble, share information, use global standards and keep a risk-based mindset when developing counter-measures," he said.

IATA has put in place a three-pillar strategy of risk management, advocacy and reporting and communication to support its members' ability to preserve cyber security and pre-empt terror attacks. At the summit, a Civil Aviation Cyber Security Action Plan was signed and the work of the Industry High Level Group, which includes various stakeholders and organizations, was recognized. A priority for IATA is the establishment of a coherent approach to cybersecurity across the industry.

It is estimated that cyber security breaches cost billions of dollars last year alone. A former member of the Lloyds of London underwriting syndicate said the potential liabilities from cyberattacks are becoming far too large for the big insurance companies to cover.

Association of Asia-Pacific Airlines director general, Andrew Herdman: "We are stuck with too many decisions being made the day after the latest outrage"

It is estimated that 94% of global companies have experienced some form of cyberattack. Despite the increasing sophistication of the general population about the risks of cyber theft or threat, about 13% of them still click on phishing attacks that could lead to the loss of their personal details, including their banking information. Large businesses will suffer an attack three times each and every year, it is forecast.

There are tens of millions of threats every day. In the first quarter of this year, there were 264 million botnet attacks. A botnet, or zombie army, is a number of Internet computers set up to forward transmissions, including spam or viruses, to other computers on the Internet. The owners of the computers are unaware they are part of a botnet.

Drones, too, are an increasing threat to the industry and not only because they enter airspace and endanger aircraft. They also have the ability to eavesdrop.

Nor are passwords, which are supposed to protect data, tamper proof. There are various password-cracking tools freely available on the Internet that can try 300 million variants of potential passwords in 20 minutes - at the cost of about U.S. two dollars per apparatus.

The industry cyber debate in Dublin coincided with the recent release of Cybersecurity And The Airline Industry, produced by PricewaterhouseCoopers (PwC). In a survey conducted by the global professional services firm in 2015, 85% of airline chief executives viewed cybersecurity as a significant risk.

"Online attacks are on the rise, resulting in headline-grabbing stories. In the last few years, we've witnessed data breaches across multiple industries, including banking, retail, health insurance and online-only businesses," the study said.

"The financial impact alone is staggering. The cost of data breaches globally could reach $2 trillion by 2019. Inevitably, cyber threats will grow in number, cost and sophistication."

The importance, and difficulties, of protecting aviation against cyber assaults was highlighted by the experts on the IATA summit's cyber security panel. Air Force general, Linda Urrutia-Varhall, from the U.S. Department of Defence, said aviation is a central focus for terrorists and criminals. Industry role-players

> Not enough is being done about aviation security. We have had so many wake-up calls in the last couple of years. We have to be doing more than we are doing. There were too many opportunities for security breaches at airports. "Biometrics need to be much more to the fore"
>
> **Sir Tim Clark**
> Emirates Airline president

Leader of Boeing Commercial Airplanes' Cyber ONE team, Faye Francy: industry cyberattacks are probably precursors to a physical attack

and authorities needed to collect and share information to deal with threats, she said.

Kurt Pipal of the U.S.'s Federal Bureau of Investigation (FBI), said airlines sit on a lot of big data that could be the target of industrial espionage. He warned airlines and their partners to be very careful about subcontractors and stressed the importance of sharing intelligence information across the industry.

"Build awareness and do not have a silo approach. Identify your vulnerabilities. Assume you are going to be hacked. Participate in a 24/7 securities operation centre. Occasionally, you could even use a 'dark agent' to test your system. Companies do fire drills so why do they not do cyber security drills?" Pipal asked.

Another member of the IATA panel, the president and CEO of Thales USA Inc., Alan Pellegrini, said aircraft had become nodes of connectivity and the types of protections that encompass connected systems need to evolve apace.

"How can we protect [commercial] aircraft that are becoming more and more connected with each other as a result of new technology?" he asked.

"Maintenance, operations, fleet and flight planning and passengers themselves generate a huge amount of data which the airline must handle properly, securely and in a way that assists their businesses.

"This data is naturally shared between different nodes and, increasingly, with aircraft themselves. Therefore, protections need to be developed as fast as the use is being made of the data."

"There is no silver bullet. We must continuously monitor threats as they materialize".

Former chief information officer at Los Angeles World Airports, Dominic Nessi, now an airport consultant with AeroTech Partners, told IATA delegates cybersecurity threats were growing faster than mitigation efforts.

"Airports have been attacked. They will continue to be attacked and anybody who thinks it is not going to happen is completely wrong. We have so many potential areas to be hacked in an airport that it's amazing. It can be done in many different ways."

He said it was not known precisely the amount of industry money lost to cyber attacks or how many airports had been attacked because the facilities that were breached did not want anyone to know about them.

Some examples, however, included 75 airports that suffered from a phishing e-mail from two nation states and an international airport that had its passport control system affected, possibly from malware. Departures at the attacked airport were delayed significantly. In another attack, an airport had its website defaced by Islamic State and the site had to be shut down.

"Many airports believe a cyberattack could not happen to them," said Nessi. The threats could be an internal threat, a random attack or a hacker assault from a disgruntled passenger, among many lines of digital assault. An extensive education program for airport managers, at all levels, also is essential."

Aviation is improving its global security, but the deterrent measures vary widely between countries. "The foundation stone of security has been rocked by tragedy. In the last twelve months, terrorists have laid claim to atrocities involving Metrojet 9268, Daallo 159 and the Brussels Airport attack," said IATA's Tyler.

"These are grim reminders aviation is vulnerable. Airlines rely on governments to keep passengers and employees secure as part of their responsibility for national security. And we are committed to working with them in that challenging task," said Tyler.

Association of Asia Pacific Airlines (AAPA) director general, Andrew Herdman, said aviation security should be

IATA's goals for enhanced industry security

Airlines and governments must:

- Work in partnership with each other and with airlines to counter the risks of terrorist threats to aviation and recognize the International Civil Aviation Organisation's critical role in facilitating better transparency
- Commit all possible government resources, particularly intelligence resources, to fighting the use of aviation for terrorist acts
- Share relevant information to ensure that measures to prevent and respond to terrorist acts are appropriate and effective

treated more like safety, where a cost-benefit analysis was typically performed before deciding on change.

"In security, I'm afraid we are stuck with too many decisions being made the day after the latest outrage. While we may harbour doubts, particularly after we have made those decisions, it is very hard to reverse them," he said.

"You lack the evidence to say 'well, if it made sense to make that decision what is the new evidence that persuades us we can relax it?' "

Emirates Airline president, Sir Tim Clark, said not enough was being done about aviation security. "We have had so many wake-up calls in the last couple of years. We have to be doing more than we are doing," he said and added there were too many opportunities for security breaches at airports.

"Biometrics need to be much more to the fore. We need to streamline the processes," he said. Clark also criticized the industry's inability to quickly locate lost aircraft and said more needed to be done to ensure air passenger safety in general. "As far as aircraft tracking is concerned, it's a disgrace," he told IATA delegates.

> "The most effective defense was government intelligence used to stop terrorists long before they reach airport property. Risk in airport public areas can be mitigated with efficient processes"
>
> International Air Transport Association

IATA said the recent attack on Brussels Airport highlighted the importance of security at landside airport public areas and that keeping this area secure is fully the responsibility of governments. The most effective defense was government intelligence used to stop terrorists long before they reach airport property. It added risk in airport public areas can be mitigated with efficient processes.

"Intelligence is the most powerful tool governments have to protect their citizens wherever they are - at work, at home or traveling. One of the biggest risk areas is large crowds," Tyler said.

Industry is helping to bolster these efforts with practical measures—Smart Security and Fast Travel—that will mitigate risk by reducing airport queues. Government and industry must be nimble, share information, use global standards and keep a risk-based mindset when developing counter-measures." ■

No great leap forward for Indian aviation

By Tom Ballantyne

Finally, the Indian government has revised its aviation policy and, as expected, it has not pleased anyone. For ambitious new airlines, one of the biggest bones of contention had been the 5/20 rule. This regulation only allowed airlines to fly internationally if they been in business for five years and had a fleet of 20 aircraft.

Under the new policy, airlines can begin flying abroad earlier than five years, but they still must have a 20 plane fleet and operate 20% of their capacity domestically.

"We want airlines to start flying quicker so there is more competition," said civil aviation secretary, R.N. Choubey, when he announced the new policy in mid-June.

Although newcomers to Indian aviation, TATA/Singapore Airlines joint venture, full-service Vistara, and AirAsia India welcomed the relaxation of the 5/20 rule, a regulation they had wanted to be abolished.

Vistara chief executive, Phee Teik Yeoh, gave his qualified support for the decision. "We would have preferred that the rule be completely abolished to ensure Indian aviation achieves its full potential." He added it was "very encouraging to see that the government has established a policy which promotes the overall growth of the country".

Said Amar Abrol, chief executive of AirAsia India: "although an 0/0 or 0/10 would have been more than welcome, the amendments made to the policy are encouraging."

"The policy gives us a clear direction to ramp up our operations in India and grow our business domestically before we scale our operations to fly international. We will focus on aggressively investing in India and increasing the fleet six to our target of 20 aircraft," he said.

Singapore Airlines CEO, Goh Choon Phong, said recently: "Ideally, there should not be a limitation. If you look at the set up outside India, an airline with two aircraft can fly to India. So I see little reason [for it], especially if you are satisfied with the way it has set up safety. Once all that is satisfied, it should not be treated worse than an external airline. Objectively, there should be no requirement at all."

Vistara chief executive, Phee Teik Yeoh: lost the battle for now to abolish aviation's 5/20 rule

The watered down regulation does not mean Indian airlines will rush into launching international routes. Vistara has 11 A320s and is at least a year away from having the 20 planes needed to fly abroad. AirAsia India has six A320s and its fleet growth plans remain unclear.

The policy has failed to fully please parties on both sides of the argument. Incumbent carriers such as Jet Airways, IndiGo, SpiceJet and Go Air, through the Federation of Indian Airlines (FIA), fiercely opposed the rule's revision. They argued they had to comply with 5/20 in their development, so new operators also should do so. FIA had warned that if 5/20 was abolished or adjusted the government also should do away with Route Dispersal Guidelines (RDG), a set of rules that force airlines to fly a percentage of their flights on tier-II and tier-III secondary routes, which are often unprofitable.

"We stick to our stand against the abolishing or relaxation of 5/20. We have also said you can't do away with 5/20 and keep RDG. Why should we keep operating unprofitable flights?" said an FIA spokesperson.

Vistara's Yeoh said he hoped the new policy would lift existing restrictions on new carriers operating codeshare flights with foreign partners. He said Vistara has been talking to potential partners such as British Airways, Emirates Airline, All Nippon Airways and Finnair. He added the carrier may accelerate its fleet plans.

The arrival of its 20th aircraft is scheduled for June 2018. The airline could lease aircraft earlier than that date and would be looking at a mix of narrow body and wide body planes with flights to the UK and the U.S. being considered.

Even airlines that have 20 planes are not quite ready to enter the international fray. GoAir, which recently took delivery of its 20th jet and the first of 72 A320NEOs it has on order, does not intend to serve regional destinations until next year.

Civil Aviation Secretary Choubey told local media: "GoAir has expressed its intention to fly overseas from next calendar year. It has indicated some regions," he said. Adding that the Gulf and Europe were among destinations the Mumbai-based operator was considering. But he said the airline "has not yet submitted a formal plan in this regard".

As well as adjusting the 5/20 rule, the new policy brought good news for maintenance, repair and overhaul (MRO) businesses. The policy waives all royalties. They can constitute up to 20% of their total costs that MRO facilities now have to pay to airports where they operate. The transport ministry has said it will try to persuade state governments to do away with value added tax on MRO activities. "These are a great set of steps, especially the one on royalty. Royalty payments can prove pretty costly for MRO operators," said Srinivasan Dwarkanath, president of the Airbus division in India. "India currently has about 400 commercial airplanes and massive order books from airlines. We need good MROs. We need the existing ones to grow," he said. ■

China rides to the rescue at Virgin Australia

After two Chinese investors agreed within days of each other to buy up to 40% of Virgin Australia, the carrier followed the news with a successful A$1 billion plus fundraising. The cash injection will go towards debt reduction at the heavily leveraged airline.

Tom Ballantyne reports

Down Under's Virgin Australia (VA) was rarely out of the news last month. As May turned to June, the carrier confirmed its newest investor was from China. As widely speculated, the purchaser was a subsidiary of China's HNA Group, HNA Innovation. The company agreed to buy an initial 13% of the debt-heavy carrier, with plans to build the holding to 20%, after Air New Zealand (Air NZ) announced earlier this year that it would dispose of all or most of its 25.9% holding in Australia's second international carrier.

As the market absorbed the news and the implications of it for VA's expansion to China, Air NZ's bosses were busy closing a deal with another Chinese company, Nanshan Group, a conglomerate with interests in clothing, finance, real estate, constructional materials and 26-month-old Qingdao Airlines of Shandong. Nanshan, Air NZ announced in early June, would buy 20% of the Kiwi airline's 25.9% equity in Virgin Australia.

Ten days later, with only 15 minutes notice, Virgin Australia CEO, John Borghetti, called a press conference to announce his carrier had successfully negotiated a A$852 million (US$627.7 million) equity raising, a response to critics' view of the airline's scrappy cash flow. Combined with HNA Innovation's $159 million investment, the deal will put $1.011 billion into the carrier's seriously depleted kitty.

Virgin Australia CEO, John Borghetti: planning to use both Virgin Australia and its low-cost carrier subsidiary, Tigerair Australia, on future short haul international routes

VA has fallen heavily into debt in its long transformation from low-cost carrier, Virgin Blue, to the full service airline it is today. After going back to its shareholders for a hefty top up loan earlier this year and then enduring public criticism of the carrier's management by a disgruntled Air NZ, the airline underwent a review of its capital requirements. It became clear the VA balance sheet was in need of extensive repair and the equity fundraising process began.

Fortunately, VA's investors, Singapore Airlines (SIA), HNA, the UK's Virgin Group, Nanshan Group and Air NZ took up their pro-rata entitlements of the equity raising. SIA, HNA and the Virgin Group also signed binding commitments to contribute to the sub-underwriting of entitlements not taken up by other shareholders. Notably missing from the participants' list, at the press conference and since then was Etihad Airways, a 21.8% partner in VA.

"Etihad is still going through their internal processes and we haven't received the outcome of that yet. Obviously, they need to go to their board," said Borghetti. At press time, the Abu Dhabi carrier had made no public statement on the matter.

The refinancing is only the tip of the iceberg for VA as it rather slowly works its way towards sustainable profits. A priority will be reducing its aircraft types from 10 to three. Its Fokker F50s have been decommissioned and 14 Embraer ERJ-190s will follow them out the door in the next three years. Its Fokker 100s will

go too. Up to six of its 14 ATR turboprops also will leave the Virgin fleet and its E-170s have been leased to Delta Air Lines. Virgin has a fleet of 131 aircraft, including three B777-300ERs, six A330-200s, two A320-200s and 75 B737-700 (2) and -800s (73), according to its website fleet listing in June.

Virgin's only firm order is for 23 new B737MAX 8s, which it announced in 2012. They are due for delivery from 2019 to 2020. It is understood the airline has converted another order for 17 B737-800s to the MAX model.

As part of the planned restructuring, inefficiencies will be eliminated in crewing, ground handling, MRO, catering and fuel handling.

When Borghetti was asked if VA's new Chinese partners threatened the airline's independence he said: "They are two separate entities based on the assumption they both acquire 20% [of the airline]. Importantly, if you look at our board protocols, we have a majority of independent directors. This company always has been run independently. No shareholder has had control of the business. It is the way it will continue to be run. Nothing will change."

On the other hand, Borghetti said VA's Chinese investors would bring huge benefits to the airline. "If we accept that the China market will keep growing the way it has been growing, and of course it will, then you have to tap that market," he said.

"You can't tap that market unless you have a strong partner at the other end that provides distribution. Like travel agents who give us feed and like airlines and so on. The value-add is going to come from this relationship."

Borghetti said when work started five years ago on repositioning the company, it was approached "with a very stretched balance sheet at the time" and with many initiatives funded with debt. It is time to strengthen the balance sheet and deleverage the company, he said.

The HNA Group has invested more than US$15 billion worldwide by taking ownership or part-ownership in companies ranging from supermarkets, travel agencies and transport related firms to nine airlines and Avolon, an aircraft lessor.

It has recently agreed to buy Swiss airline caterer, Gategroup Holding, for a reported US$1.4 billion and is in talks with Air France to buy 50% of its catering unit, Servair. Other recent investments included the 1,400 property Carlson Hotels Inc, most widely known for its Radisson hotel chain.

Nanshan is a large, privately owned Chinese conglomerate that controls Qingdao Airlines and a private jet business along with interests in sectors spanning aluminum, agriculture, education and property. In Sydney, it owns the Riverside Oaks Golf Course and the Pullman Hotel, adjacent to the international airport.

VA's first outlay with its new found cash will be repayment of the A$425 million (US$313.2 million) advance it received from its existing shareholders earlier this year. "The balance of the funds will be used to reduce debt and [will be] linked to a very rigorous and comprehensive cost reduction program and efficiency drive," Borghetti said.

There will be some redundancies among the carrier's 10,000 staff, but new positions will be created as the airline was restructured, he said. "It's an evolution, not a slash and burn exercise," he added.

For Borghetti, the most exciting aspect of the new partnership is the opportunity it offers VA to make serious inroads into China. Late last month, Australia's International Air Services Commission approved VA's application to fly to Beijing and Hong Kong, with the flights to commence on June 1, 2017. VA can link its services to the two cities with Hainan Airlines' extensive regional network.

He has the aircraft to serve the routes. "We are fortunate," he said. "We have a pretty good mix: B777s and A330-200s. The B777s are a good volume mover for long-haul travel to America and the A330-200 is perfect for China, particularly the northern part of China. The A330-300 can't make Beijing, but the -200s can.

"When we took the -200s for domestic operations we bought them with the view that we needed the wide-body for trans-continental services. But we knew that at some point we would need some international coverage in Asia and the best aircraft would be the -200. It has the range."

Would Virgin consider flying to Europe? It services this demand with code-shares with SIA through Singapore and Etihad Airways via Abu Dhabi. "I am very happy with what we are doing with SIA and Etihad. It works very well for us," he said. "There are no plans afoot for us to start flights to Europe.

"We have good coverage there and that's not going to

> I'll be sticking around. There's lot to do. I'm just getting on with it. In the big picture, this has been about repositioning the company, growing it, fixing the balance sheet and making it ready for the next stage of growth. Obviously, it is going to be China
>
> **John Borghetti**
> Virgin Australia CEO

change. More holistically, are we going to fly more internationally as Virgin? I'd answer that question two-fold: Categorically yes to China with the Virgin brand. Let's not forget inbound China is the only market that is growing at the moment. The Australian domestic market is pretty flat and outbound from Australia is not too flash either.

"The big standout is inbound China so yes, we will fly to China. The next question is about short-haul international. What roles do Tigerair Australia, (a 14 A320 LLC owned by VA) and Virgin play? We are not ready to talk about that yet, but we will have two brands available for short-haul international."

Tigerair Australia's only international destination is Bali in Indonesia. Borghetti's remarks suggested VA's international network almost certainly will be expanded to include Singapore and/or Bangkok.

The fact that VA is finally headed for Asia has not elicited much public comment from friend or foe of the carrier. Qantas group CEO, Alan Joyce, said he would rather be in his position in China and Asia than his competitor. (see LOADED page 22).

SIA CEO, Goh Choon Phong, speaking during the International Air Transport Association (IATA) annual general meeting in Dublin last month, refused to be drawn on the impact of VA's new shareholder mix. "It is premature to talk about it. We will see what comes out of it," he said.

SIA, which carries VA traffic to China through Singapore on a code-share arrangement, may lose some business from the deal. Or it may look at its own tie-up with HNA, its new partner on the Virgin Australia board.

Unlike the VA/HNA investment, the Nanshan buy-in surprised the market. Kuala Lumpur-based analyst, Shukor Yusof, head of Endau Analytics, described Hainan Airlines as a very well run airline. "They are flush with cash and seemingly have a mandate from the (Chinese) government to go around the world and source or make lucrative investments," he said.

"It makes sense for them to go into this part of the world where there is a boom in Chinese demand. When you have very deep pockets you can do anything. They have a huge appetite to do more, not just from an airline perspective, but from the entire ecosystem of transportation."

Borghetti said:"the big, big issue for consumers is they have the choice of two strong, very competitive airlines who cover every part of the market and give consumers choice.

"We can't allow ourselves to say 'this is the next step and once we have done that, that's it, we're good'. You have to keep re-inventing and evolving. It will never stop. The moment it stops is the time the company will be overtaken and won't have a future."

As for his future, Borghetti said: "I'll be sticking around. There's lot to do. I'm just getting on with it. In the big picture, this has been about repositioning the company, growing it, fixing the balance sheet and making it ready for the next stage of growth. Obviously, it is going to be China." ■

Garuda Indonesia's bottom line zealot

After guiding Garuda Indonesia back to profit in 2015, the airline's CEO and president director, Arif Wibowo, is embarking on a fleet and network expansion to lift the carrier into the top tier of the world's airlines.

Tom Ballantyne reports

When Arif Wibowo took charge of Garuda Indonesia in December 2014 , the carrier was about to announce a $368.9 million loss for that year. Twelve months later, his "Quick Wins" strategy returned the airline to the black, with a profit of $77.7 million.

"It was perfectly done," he said of the plan, which reduced costs, re-structured the network and streamlined part of the fleet. "We benefited from the fuel price. At the same time, we were struggling with the depreciation of some currencies in the region, not only the Indonesian Rupiah but in other markets like Japan, Korea and elsewhere. That really dragged on the top line," he said.

But the Quick Wins of 2015 are not enough for the very energetic and social media focused Wibowo. He told Orient Aviation on the sidelines of the International Air Transport Association annual general meeting in Dublin last month that he is pressing ahead with "Sky Beyond".

CEO and president director Garuda Indonesia, Arif Wibowo: Hopeful of flying to the U.S. in 2017

The new strategy aims to add growth of between five and six per cent a year to the parent company's businesses and integrate the operations of the Garuda group to improve the efficiency.

Its goal is to build the Garuda Indonesia group into an enterprise with an annual turnover of $10 billion, compared with $3.8 billion today, and for the airline and its subsidiary, Citilink, to be the operators of 250 airliners, 53 more aircraft than the two carriers fly now.

Wibowo said: "Now is the era when we have to be on a par with other global airlines. We have to be strong, not just domestically, but regionally and internationally."

A critical element of the expansion strategy is a fleet renewal plan that will see A320neos for Citilink, 50 B737 MAXs for Garuda, with 30 options, and the conversion of an order for seven classic A330-300s to 14 new A330neos. Wibowo also is in discussions with Boeing and Airbus about a potential order for B787s or A350s.

"I think size really matters [when competing with leading carriers] so we have to fight with bigger capacity, but have a low-cost mindset while delivering high service," said Wibowo, who ran the group's low-cost carrier, Citilink, before he was promoted to the top job at Garuda.

At present, Garuda flies B777-300ERs to London and

Sky Beyond at Garuda Indonesia

Said Garuda Indonesia's CEO and president, Arif Wibowo: "we are working with consultants to make sure that in the next five to 10 years and onwards Garuda will be run as a business by synergizing every company in the group.

"I have to prioritize and understand which is revenue stream driven in the group and which one is the service stream. I hope by restructuring the organization we will build and, as I say, dream of becoming a $10 billion business with margins of at least 5%."

The key elements of the Garuda Indonesia Group's Sky Beyond strategy are:

* Leveraging Indonesian hospitality because it is the differentiator Garuda can offer to the market.

* Building a low-cost leadership mindset at Garuda's full-service airline and encouraging Garuda staff to do everything possible to maximize returns.

* Achieving work synergies across the Garuda group, which comprises Garuda itself, Citilink, the air cargo arm, GMF (Garuda maintenance), ground handler Gapura Angkasa and Aerowisita , the group's food, travel and hotel arm.

Amsterdam, as well as to Jeddah. In March, it moved its London services from Gatwick to Heathrow and offers a five times a week service. It flies to Amsterdam six times weekly.

It also has been focusing on new destinations in China, where it flies to Beijing, Shanghai and Guangzhou from Jakarta. This year it wants to link the big three Chinese cities directly with Denpasar, which is the entry airport for Indonesia's premier resort of Bali.

But the most important breakthrough Garuda could achieve this year would be the right to fly to the U.S. Garuda suffers from the problems of an national aviation infrastructure and regulatory regime that does not meet U.S. aviation standards.

The airline cannot fly to North America because Indonesia only has a Category 2 rating from the U.S. Federal Aviation Administration (FAA).

But Wibowo told Orient Aviation in June there could be positive news coming from the FAA for Garuda. "I am hopeful it can be sorted out by the end of this year so flights to the U.S. can be considered for next year," he said.

"If that happened, it would be part of the utilization of the B777 to the west coast cities of Los Angeles or San Francisco. The size of the market from the U.S. to Indonesia is around 400,000, but from the west coast it is around 120,000 from Los Angeles. So we could consider launching services."

The Garuda CEO said his ultimate aim is to shape Garuda into a stable business that has sustainable profits. To do that he has identified four priorities: fleet costs, reduced overheads, a restructured route network and a concentration on revenue management.

"We also are strengthening our IT backbone on the commercial side. With the digital economy, e-commerce has to be improved as soon as possible. Garuda has to be very strong in high-tech and high-touch, human-to-human and be customer focused," he said.

Another plus for the group is Garuda's planned move to the new Terminal 3, Ultimate, at Soekarno-Hatta International Airport in Jakarta. "Ultimate" is scheduled to open at the end of the year. Garuda, its SkyTeam alliance partners and all other international airlines will be housed at the terminal, which will significantly enhance the airline's hub status at its home airport.

> In terms of traffic we have grown it at around 4%-5%, but in terms of yield it has decreased about 13%. That is very challenging. But at least we are still secure about capacity growth. I am confident we will be profitable overall this year. But we have to do that consistently
>
> **Arif Wibowo**
> Garuda Indonesia President and CEO

Longer term, the government has said that in five years, Jakarta's Soekarno Hatta airport will have a third runway and that it expected to have approval by then to build a fourth runway at the airport metropolis. It is forecast that transit passengers will increase from 12 million a year today to 15 million annually within a few years.

As for 2016, Wibowo is well aware that these are challenging times. "It is quite tough. We are still growing so our profit in the first quarter was quite narrow, only $1 million. This is very low.

"In terms of traffic we grew it around 4%-5%, but in terms of yield it has decreased about 13%. That is very challenging. But at least we are still secure about capacity growth. I am confident we will be profitable overall this year. But we have to do that consistently." ■

Is U.S. closing down on global open skies?

Asia-Pacific voters may have no say in the upcoming U.S. elections, but the outcome could have serious implications for the region's economies and its airlines. Washington is under increasing pressure to roll back its open skies policy, fueling fears global liberalization of aviation is under threat.

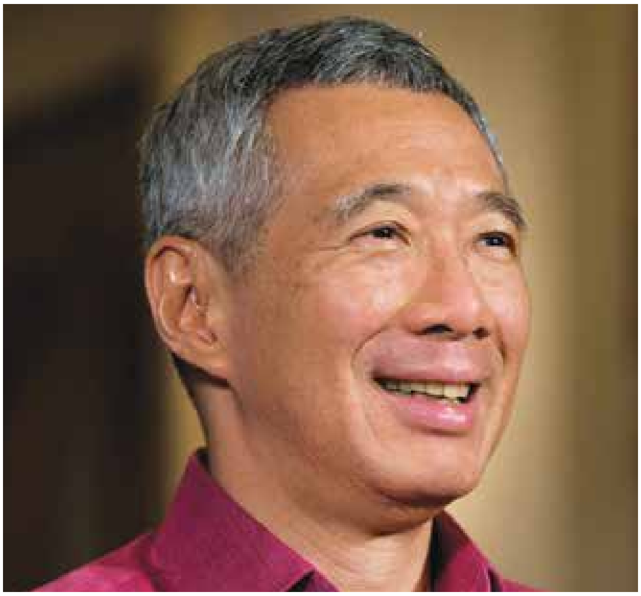
Tom Ballantyne reports

CEO Qantas International and Freight, Gareth Evans appears to have no apparent concerns about the U.S. Department of Transportation's (DoT) slow response to approving a joint venture between the Australian carrier and its U.S. partner, American Airlines. Some industry observers think he should.

The partnership has been approved by the Australian and New Zealand regulators, but to date there has been no news from Washington D.C. on a positive signing. At the International Air Transport Association (IATA) annual general meeting in Dublin last month, Evans was pragmatic about the delay.

"We are not in daily contact with them (the DoT), but we are in reasonably regular contact with them. I think the work load they have over a range of different approvals is partly the issue. There's no hard and fast date," he said.

"We would have liked the joint venture to have been approved earlier, but the Americans are working through the process and we're looking forward to hearing something in the not too distant future."



Singapore's prime minister, Lee Hsien Loong: Visiting the U.S. in August to conclude critical trade and liberalization agreements before the November presidential election

If it was simply that U.S. regulators are snowed under with work – during a contentious presidential election campaign – then it could quite rightly be an administrative delay.

But in recent months, industry analysts have been wondering if the U.S. is pulling back from the global Open Skies policy it has been pursuing for years.

A case in point is the very public dispute between Gulf carriers – Emirates Airline, Etihad Airways and Qatar Airways – and America's big three airlines, United Airlines, Delta Air Lines and American Airlines, about subsidies the Middle East airlines allegedly receive from their governments.

To date, there is no happy ending in sight. Instead, domestic U.S. politicians and unions leaders are arguing that U.S. open skies is costing the nation jobs.

In Dublin, Ireland's new transport minister, Shane Ross, in the opening address at the IATA gathering fired a broadside across the Atlantic when he warned the U.S. against reversing airspace liberalization between the U.S. and Europe.

His particular beef was the delay in granting Norwegian Air International rights to launch flights between Cork and Boston. "The airline is still waiting for a permit from the U.S. authorities. Representations on this issue have been made at the very highest level and we're still waiting. It's extremely frustrating in this new era of liberalization," he said.

While that may be happening on the other side of the world, one established Southeast Asia-based aviation analyst believed the region's airlines should be extremely worried about the potential damage that could be done by a U.S. liberalization roll-back or an election outcome that gives Donald Trump the U.S. presidency.

Head of Endau Analytics, Shukor Yusof, said Trump has promised, if elected, to opt out of the Trans-Pacific

Partnership Agreement (TPPA), the groundbreaking regional free trade deal concluded last October between the U.S., Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, Peru, New Zealand, Singapore and Vietnam.

TPPA has huge job creation potential across the region's economies, including at airlines. "It should be a worry because the TPPA has not been ratified and Trump has said he is going to dump it. It is a very serious concern because it has some bearing on aviation and on the transportation industry," said Shukor.

With the big American airlines seeking curtailment of Gulf airlines' access to the NorthAmerican market, there is also a belief they may apply that same political pressure to contain Mainland Chinese airline trans-Pacific expansion.

From this year, Chinese airlines have flown more passengers between China and the U.S. than U.S. airlines. China's major carriers have made it clear they are intent on expanding their international reach much more rapidly than they have done in the past.

At present, their growth is being held back by restrictive traffic rights in France, Germany and more recently in the U.S.

The U.S. has more than 100 liberalized air services agreements in place, but it is reported to be reluctant to negotiate an open skies treaty with Beijing. "There is no open skies between China and the U.S. because talks have stalled. What is happening in America makes it less likely to happen, especially with the uncertainty surrounding the election," Shukor said.

Nothing can be ruled out, he added. Singapore, which is usually three or four steps ahead of everybody else, is now analyzing the impact the U.S. election will have on ASEAN

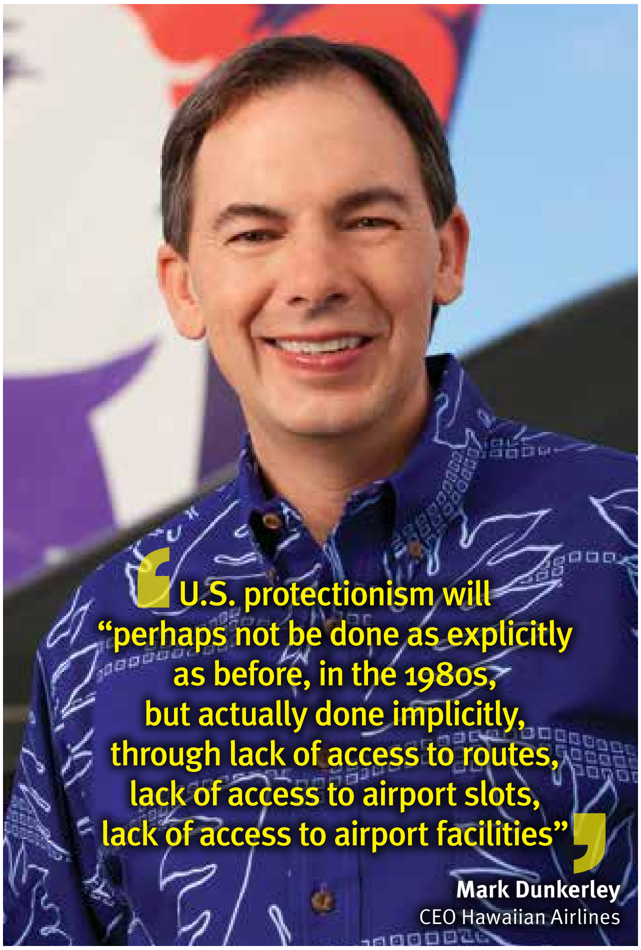
"We'd have liked the joint venture to have been approved earlier, but the Americans are working through the process and we're looking forward to hearing something in the not too distant future"

Gareth Evans
CEO Qantas International and Freight

(Association of Southeast Asian Nations) and Singapore itself, he said, especially as ASEAN has just introduced its own open skies policy.

He said Singapore's prime minister, Lee Hsien Loong, will visit the U.S. in August, apparently in an attempt to conclude critical trade and liberalization deals before any change of government. One of the key items on the agenda in talks with outgoing President Barack Obama will be the TPPA.

In the U.S., pressure for a roll-back in liberalization is not universal. Several smaller carriers have sided with the Gulf airlines in the dispute. But Hawaiian Airlines chief executive, Mark Dunkerley, speaking to Orient



U.S. protectionism will "perhaps not be done as explicitly as before, in the 1980s, but actually done implicitly, through lack of access to routes, lack of access to airport slots, lack of access to airport facilities"

Mark Dunkerley
CEO Hawaiian Airlines

Aviation in Dublin, believed there was "growing pressure" in the U.S. to pull back on liberalization.

"It needs to be resisted," he said. "We are very much committed, as a small airline, on developing new products and ideas and being able to grow. We are focused on an environment in which markets are opened rather than closed so the large airlines don't become so dominant that they stifle competition and innovation."

He sees early signs there will be pressure to re-regulate air traffic, which he said amounts to protectionism. "And not perhaps done as explicitly as before, in the 1980s, but done implicitly through lack of access to routes, lack of access to airport slots, lack of access to airport facilities," he said.

"All of these things, the approval of joint ventures between dominant airlines on both ends of routes, all of these things represent barriers to competition, barriers to industry growth and barriers to innovation."

While it awaits U.S. approval for its trans-Pacific partnership, Qantas said the benefits of the relationship were clear. "We have a much better spread of destinations across the Pacific. We are seeing the relationship with American starting to stimulate some inbound traffic to Australia," Evans said.

"It gives us better connectivity beyond the various points in the U.S. for Australian travelers travelling the U.S. We have American adding additional services into New Zealand so the benefit to consumers is clear."

Besides, Evans pointed out, the position in the Pacific already is one of partnerships and Qantas is not any different. "You have Air New Zealand partnered up with United, Delta partnered up with Virgin [Australia] and American with us," he said. ■

LOADED

Qantas Group CEO, Alan Joyce answers his critics with record profits and transformed international operations.

TOM BALLANTYNE reports from Dublin

If Qantas Airways group CEO, Alan Joyce, has any concerns about Chinese investors' recent dramatic moves into the boardroom of arch rival, Virgin Australia, he is not showing it. As events played out at Virgin Australia's Brisbane headquarters, following the announcement that Hainan Airlines parent, the HNA Group, was taking a major shareholding in the airline, Joyce was in a Dublin hotel meeting room with China Eastern Airlines chairman, Liu Shaoyong. Under discussion was the expansion of the partnership between Qantas and the Shanghai-based member of China's "Big Three" airlines.

Joyce demonstrated the same equanimity a few days later when Air New Zealand announced it was selling most of its own holding in Virgin Australia to Chinese engineering and construction conglomerate, Nanshan Group.

In the Irish capital to attend the International Air Transport Association (IATA) annual general meeting, Joyce brushed off suggestions that a potentially resurgent Virgin Australia, now approved to fly to China for the first time, and allied with Hainan, China's fourth largest airline, might alter the balance of airline power Down Under.

"We think our position in Asia, including China, is very, very strong given the fact we have a massive network from Australia into a lot of destinations in Asia and that the partnerships we have in the region are just phenomenal," he told Orient Aviation.

"We have a great partnership with China Eastern. We have a code share with China Southern [Airlines]. We have a network in China that is pretty well established. We have just moved into Eastern's terminal at Shanghai's Pudong airport.

"It's a big China market with huge growth. It's a market that has more than 120 million tourists a year of which Australia, as we all know, gets 1%. It's a market I think will quadruple in the next few years."

It is not only mainline Qantas that is broadening its presence in China. Its low-cost subsidiary, Jetstar, and its stable of Asian offshoots have an expanding Mainland network.

Joyce pointed out that estimates are there will be up to 800 million Chinese tourists in the next 20 years. "So the numbers for us are going to be extremely important and extremely important for the domestic market as well, given where the tourists go," he said.

"We're comfortable with the partnerships we have and we think we can compete, along with our other alliance partners, American Airlines and Emirates Airlines, with the best in the world. I'd rather be in our position than in our competitor's position."

Indeed, China is not the only priority on Joyce's expansion map. His once controversial decision to abort a long-standing joint venture with British Airways, on the traditional Kangaroo Route between Australia and London, and climb in bed with Emirates is a massive winner.

"The Emirates partnership has been phenomenal," said Joyce. "Both Qantas and Emirates are extremely happy. Before the partnership was launched we were carrying 400,000 people to continental Europe on the Qantas code. This year we will be well over six million. It has delivered massively for us and is one of the pillars that helped us turn around the international business."

Across the Pacific, a joint venture with oneworld alliance partner, American Airlines (AA), that has been approved by Australia and New Zealand regulators but still awaits the green light from U.S. authorities, promises to be just as lucrative as Emirates for Qantas.

Under the agreement, Qantas, which previously flew to Los Angeles and Dallas Fort Worth, has returned to San Francisco after a long absence. At the same time, AA has launched services to Sydney and added Auckland to its trans-Pacific network.

Joyce said AA would not have come on to the route without the partnership. "They made that very clear. There is more capacity, more competition and more distribution taking place in the U.S. because of it," Joyce said.

"People can complain about it, but our partnership with American provides more destinations in the U.S. and provides better connectivity, better co-ordination and consumer benefits."

He said the U.S. market is still a very good one for Qantas, despite the fact there is more competition and more capacity in the sector because of the addition of AA and Air New Zealand services.

"We are very pleased with the performance of that route. San Francisco did not work for us last time, but this time it has worked straight away and is a good indication that the U.S. is a very good market. We are exceeding our expectations to San Francisco, which shows the power of the transformation program at Qantas. It is making routes work that didn't work in the past."

For Joyce, who has been vilified by much of the media and also by some competitors for Qantas' dismal performance in recent years – especially losses of up to $400 million a year at its international unit - the group's successful transformation program is music to his ears.

He has answered his critics by achieving a re-engineering of Qantas' operations and recent record profits. By December last year, $1.03 billion of savings – of a three-year $1.5 billion target – were achieved. Excluding fuel, available seat kilometres (ASKs) have been reduced by eight per cent and were on target to reach 10 per cent by press time.

> **There are lots of opportunities, not just with the B787s, not only in Qantas but in the Jetstar operations. It's a lot better than we were a few years ago when we were struggling to justify acquisitions of aircraft for parts of our business that were not making returns. We're in such a great position now that return on investor capital across all of our businesses covers its back and it is allowing us to go after growth for the first time in a long, long while**
>
> **Alan Joyce**
> Qantas Airways group CEO

That's not to say the radical re-writing of the group's operations was without heartache. Five thousand jobs were eliminated. There were deferrals of B787 orders and A320 deliveries. The retirement of the group's B747-400s and B767-300s was speeded up, a heavy maintenance base at Avalon near Melbourne was shut down and executives had their salaries frozen.

The result, a year after the airline group announced the massive loss, of which much was related to a fleet write down, was a $413.7 million profit to June 30, 2015. It was the biggest turnaround in Australian corporate history and was followed by an interim profit of $683.3 million to December 31, last year.

"What's great is that so many parts of the business are performing really well. Jetstar International is performing very well. Qantas international is performing very well. Domestic is performing very well and the Asian business is doing very well," Joyce said. Low-cost subsidiary, Jetstar, with its Jetstar Asia Singapore, Jetstar Japan and Jetstar Pacific in Vietnam offshoots has become a critical contributor to the group's performance.

"We always have said that our Asian businesses, like any of our businesses, have earned the right to grow and you can't tap unprofitable growth, which some carriers like to do. It has been demonstrated we can make returns from these businesses," he said.

"The first half of the year was fantastic. The big progress has been made in Japan. We have a huge franchise in Asia. We are doing it in a very considered way and Jetstar has been a massive growth vehicle. The airline is only 12 years of age and it has more than 120 aircraft across the region. We have been profitable every year at Jetstar."

Joyce said the group's strategy in the region, and in Australia, is clearly demonstrating good results. Our intellectual property, with the two brand strategy, is working really well in Australia, in Vietnam and in Japan and that intellectual property is being sought by many carriers," he said.

"You've got Japan Airlines and Vietnam Airlines using our brand in the region and that shows how well-considered and thought through the Qantas group strategy has been in developing low-cost carriers. We'll keep on enhancing and building it, but we will do it in a profitable way."

The next big step forward for the group will be the acceptance of eight B787-9 Dreamliners at the mainline carrier, the replacements for five B747-400s. Jetstar has 11 B787-8s. The first four B787-9s will arrive at the airline group's Sydney headquarters in the 2017-2018 financial year with the remaining four scheduled for delivery in 2018-2019.

The new aircraft will open up some exciting, new non-stop opportunities, said Joyce. "There is Sydney-Chicago, Melbourne-Dallas or Brisbane-Dallas. There's the possibility of flying it [the Dreamliner] from Perth to London. Settling on the network will depend on the support we receive from Australia's state governments and airports," he said.

"We are just starting the dialogue with the airports and governments. You'll see a very luxurious configuration on these aircraft. There will be a big business class and a big premium economy because of the distances we are flying. We obviously will be giving some very good seat pitch for the economy seats because of the length of journeys."

As well as the eight firm orders for the B787-9s, Qantas has 15 options and 30 purchase rights for 787s. "We have a lot of aircraft on order with good pricing and good delivery schedules. If we can make good money with those eight, the happiest thing we will do is order the rest of them," said Joyce.

The Dreamliner is not the end-game for Qantas. Longer term, said Joyce, Qantas is extremely interested in the ultra-long-haul B777X or the A350. "We have a bit of time," he said.

"The B777X is not going to be available until 2022, 2023 or probably a bit later. But Boeing and Airbus always keep some slots back for big brands like Qantas so we would be able to get availability when we need it.

"Not many airlines fly the lengthy sectors that Qantas does, Joyce pointed out. "We are at the forefront and always have been. We have operated some of the longest operations in the world," he said.

"We'd like to have the B777X or A350 in our [long-haul] fleet eventually. It changes the game completely for Qantas, allowing us to have a [long haul] network we could only have dreamed about in the past"

"It's the nature of where Australia is. Our pilots and engineers are very good at managing fuel and flight planning on these routes. So it's good expertise to have.

"It is why we bought the B787-9 and why we'd like to have the B777X or A350 in our long-haul fleet eventually. It changes the game completely for Qantas, allowing us to have a [long haul] network we could only have dreamed about in the past."

Among the other possibilities, when the final decision is made about the A350 and B777X, are non-stop services from Sydney to New York and London.

Qantas also has ordered a large number of A320neos, destined for Jetstar as replacements for its A320 fleet, but no specific delivery dates have been announced. Qantas itself is deciding on either the A320neo or the B737MAX to allow it to phase out its B737s.

"We're a lot better than we were a few years ago when we were struggling to justify acquisitions of aircraft for the parts of our business that were not making returns. We're in such a great position now that return on investor capital across all of our businesses covers its back so we can go after this growth for the first time in a long, long time," Joyce said.

For Qantas, the transformation process was not only about cutting staff and reducing costs. It also has been about introducing efficiencies that have broken ground for full service airline operations.

One example is that Qantas is the only full service carrier that turns around its domestic flights in 35 minutes. "A pilot came up with an idea called fish-boning where the cleaners come on to the aircraft as people are getting their bags down," explained Joyce.

"There are always gaps. The cleaners go into the seats and clean as people are disembarking. It's a very efficient use of the ground time. We are moving to more 35 minute turns in the domestic market over time.

"Last time, [the most recent assessments) we had the highest on-time performance in our history domestically. The utilization on B737s overtook our competitor for the first time since they were created.

"We are continuing with this drive because our people are figuring out ways of improving efficiency. There's more of that to come and its part of our transformation program. It will free up more aircraft and those aircraft will either help us retire airplanes early, help us return leases or help us take opportunities internationally."

One crucial airline operational cost that does not concern Joyce is the trajectory of fuel prices. "The way we always have worked is to take out hedging and to be able to cope with it. What determines low or medium or a high oil price is supply and demand," he said.

"When you have a functional market where everybody is acting commercially you can cope with a high oil price and you can cope with benefit from a low oil price as well. So we give ourselves time for the market to correct.

"We are very well hedged. I'm not going to quote you the figures. As oil prices go up, and if they go very high, those hedging benefits kick in. It gives us time to correct capacity and the airfares needed to cope with that low return.

"More than 70% of our profits come from domestic traffic and frequent flyers. Domestically, we are seeing all airlines acting commercially and making corrections to capacity when the demand is not there. So we think that component of our business is very stable.

"But it is the 30% associated with international that is a very different business and that is because of the transformation program. Very good returns on our international business were made in the first half and it definitely received a big benefit from fuel.

"Of course, as fuel goes up that business gets an impact, but we see the transformation program making that business sustainable through the cycle. It is why we've always said our target is to recover cost of capital and return of investor capital right through the cycle. We believe we are in a position to do that going forward, even with a high oil price as part of that mix."

And for weary Qantas shareholders there is finally some good news. "We got our investment grade credit rating back and are one of the few airlines around the globe that has. We are generating a lot of free cash," Joyce said.

"So we decided this year to make a A$1 billion return to shareholders. It will be A$500 million in August, which was capital return.

"We are completing a A$500 million buy-back that we expect to finalise by the end of June. We are making good progress. Next year, the board will look again at the cash position of the company, which is very strong.

"We will look at the appropriate ways of capital management. The company will consider if it is optimal to issue a dividend or optimal to do another buy-back."

As for rival, Virgin Australia, and the arrival of Chinese investors with deep pockets at the carrier, Joyce's view is clear. "When it comes to the competition we want a stable, competitive environment where the competition is acting commercially.

"It is very clear from what the shareholders have said at our competitor. They all wanted to make a return. It's not making a return for them. They're burning through cash. They need to correct their balance sheet.

"But there is nothing that anybody is saying that argues the competitive dynamic is going to change, that we are not going to have a commercial operation and that continues to be important for us.

"The domestic market, as long as I've been here, has had two players and I don't think that is going to change. While I'd love to have a monopoly, that's just a dream."

One fact that is startlingly clear: Qantas is reborn. It is full of optimism and well and truly back to its old self.

The "Flying" is decidedly back in the Flying Kangaroo. ■

Airbus on the supplier warpath

The normally uber cool Airbus president and CEO, Fabrice Bregier, is losing patience with delinquent suppliers as delays hold up A350 deliveries to its customers.

Tom Ballantyne reports from Hamburg

When it comes to A350 seats and bathrooms, Airbus boss, Fabrice Bregier has a big problem – several of the groundbreaking jet's suppliers.

In a year when the Toulouse headquartered manufacturer is supposed to deliver 50 A350s to airlines around the world, nine had made it to their customers at press time.

The airplane manufacturer has sold 804 of its new A350 XWB jet, but only delivered 24 to date (at press time).

Speaking at the manufacturer's 2016 Innovation Days, Bregier said: "Our customers, when they fly long range, expect to have toilets with doors that close.'" And many of them did not. "I was not satisfied. I was upset," he said.

"I joined Airbus almost 10 years ago and we started this new A350 development in early 2007. We went through tons of difficulties. We put together thousands of complex parts to assemble this aircraft and now we are blocked because seats or toilets are not ready or the quality is poor.

"It's a bit like getting your new car, but you have something missing that does not allow you to drive it.

"Everything is there except for the seat. This is frustrating, but this is our responsibility to make it work with the suppliers."

Bregier said cabin suppliers are very good at marketing. They are not only ramping up work for Airbus and Boeing, but for their own retrofit businesses.

"But they are understaffed in manufacturing and engineering and in the quality of their program and supply chain management.

"They just cannot continue like this. This is the message and I will constantly repeat it very vocally: "I will progressively get rid of delinquent suppliers who are not meeting the standards of our customers."

In other words, Brégier warned that suppliers who continue to fail at delivery milestones could see themselves not only removed from the supplier furnished equipment (SFE) catalogue, but potentially blocked from working with Airbus.

When Taiwan's China Airlines (CAL) announced last month that Airbus had to revise its delivery schedule for its first A350 from July to September, it was the latest delay in what has become a huge headache for the European plane maker.

CAL has 14 of the aircraft type on order and was due to receive four this year, six in 2017 and the final four in 2018.

And the flag carrier is not alone in waiting longer than expected for the jets planned by airline customers to bring huge savings in fuel costs and overall economics to their operations.

Thai Airways International was supposed to receive the first of eight A350s in July, but its delivery has been pushed back to August. Cathay Pacific Airways was in line to accept the first of the 48 A350s it has ordered earlier this year, but it did not take delivery until late May. It expects another nine at its Hong Kong headquarters by year end.

A spokesperson for Cathay Pacific told Orient Aviation the carrier was targeting delivery of 22 A350-900s in 2016 and 2017. "It is our normal practice to build some flexibility into our annual aircraft delivery schedules to take into account different and unforeseen scenarios," she said.

"The Cathay Pacific team

Airbus bosses Didier Evrard, Tom Williams and Fabrice Bregier: Airbus making production changes that will deliver a "a much higher level" of A350 output in 2016

is working very closely with our cabin suppliers and Airbus to protect the integrity of the delivery program to ensure our A350-900 aircraft are delivered according to schedule."

And the A350 delays are not the only production and delivery issues the company is facing.

Problems with the engines for its new A320neo have forced the postponement of the aircraft to its initial customers. Delays caused by teething problems with the Pratt & Whitney's PW-1100G engines, said Airbus chief operating officer, Tom Williams, ruefully, has meant the company has effectively been building A320neo "gliders".

Bregier said in Hamburg that production will ramp up on both the A350 and the A320neo and delivery targets could still be met.

Can Airbus achieve its target of 50 deliveries this year? Executive vice president and head of programs, Didier Evrard, said yes it can, but conceded the delay issues were placing "additional stresses on the system", in a manufacturing environment already stressed by an aggressive delivery timeline.

"The 50 (A350) aircraft: we have challenges for that," he said. "I am really disturbed by the lack of cabin equipment. Cathay Pacific's seats are being delayed. We have the same issue with other operators as well.

"Whether it was seats in the catalogue or it was seats chosen by the customer themselves, it was no different. That was a big crisis. And we have issues with other cabin suppliers so [it has been] a very, very difficult beginning of the year."

There had been some improvements in the last three months, he said, but they had come at a price. "We have to mobilize additional Station 20 (final assembly line positions) where we put the cabin in the aircraft," he said.

"We are lucky that this year the A330 is going down so this frees up additional Station 20s that we can use for the A350.

"A number of additional changes are necessary to meet the targets. "What we are putting together today is a strong summer plan to allow us to reach a much higher level of throughput in the second half of the year.

"We are where we are. Fixes are in place: additional capacity of workmanship, hangars and stations. The target remains absolutely achievable, but it will come with a very high level of effort from the A350 team and industrial systems to enable that because the level of disruption we have seen with these cabin problems is very high."

As for the A320neo "gliders", Williams said new standard Pratt & Whitney PW1100G engines are about to arrive at the Airbus Final Assembly Lines in Hamburg and Toulouse, so deliveries [of the A320neo] will resume.

"The aircraft are parked, finished, painted and ready to go. All they need is engines," he said. Pratt & Whitney has developed software upgrades and a hardware fix that reduces the problem of cooling time during engine startup.

The manufacturer wants to limit the delay to 90 seconds per engine in the short term and to 30 seconds by the end of the year. For now, only Lufthansa and IndiGo have taken delivery of the new variant - a total of six aircraft.

Querulous Qatar Airways has refused to accept the aircraft until the fix is completed. It cancelled the delivery of its first A320neo. Qatar Airways group chief executive, Akbar Al Baker, said months of delays to the single aisle plane allowed the Doha-based airline to invoke a cancellation clause with Airbus.

Al Baker has intimated that his airline, the one-time launch customer for the A320neo, could walk away from more orders when contracts permitted.

Qatar has ordered 50 A320neo-family planes and was due to receive the first of the type last year. Al Baker said that under the original agreement the airline should have had five A320neos in service by now.

"It is making a huge impact on my bottom line. We are, quite frankly, screaming," he said.

Pratt & Whitney took the unusual step of publicly rebuking a customer when it said Al Baker's comments were "completely inaccurate" and that they "mischaracterize the performance of the engine".

The engine maker said it is meeting its fuel-consumption promises and has "resolved the very few initial teething items airlines have experienced" and that information about its "solutions for the items are well known" and widely disseminated to its customers.

Pratt & Whitney is now delivering production engines to Airbus with changes, but they have yet to be flight-tested.

Brégier said "mature aircraft" would be ready by mid-year and that Airbus aimed to meet its delivery commitment, but acknowledged "it will be challenging".

At the end of last month, Airbus finally had some good news. On May 31, it received joint type certification of the CFM Leap-1A-powered version of the A320neo. The variant is to be delivered in July or August to an as yet undisclosed customer. ■

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>
> **Fabrice Bregier**
> Airbus President and CEO

Airbus' ink jets

Astonishing 3D printing or Additive Layer Manufacturing has revolutionized the design and printing of airplane liveries at Airbus. Now the European aircraft manufacturer is using the technology to build entire aircraft, chief correspondent, *Tom Ballantyne,* learnt at Airbus' recent Innovation Days in Hamburg.

THOR can't really be described as a commercially viable aircraft, but it has flown. The letters stand for Test of High-tech Objectives in Reality and it is one of the more recent developments in Airbus' drive to find new and more efficient ways of building aircraft.

It is, in fact, the world's first 3D printed aircraft and it is one of the more recent developments in Airbus' drive to build its aircraft more efficiently. So far, THOR it is only a drone with a wingspan of four metres, but Airbus believes the miniature flying machine is a major milestone in aerospace technology.

The airplane, which took four weeks to build from parts entirely 3D printed from aluminum powder, is scheduled to complete 16 flights in 2016.

But building experimental printed planes is not the end of the story. Like its U.S. rival, Boeing Commercial Airplanes, Airbus is 3D printing many of the parts it uses to build its jets.

A bionic cabin bracket "printed" from titanium powder made its first flight in an A350XWB on June 20, two years ago. Airbus also has manufactured a cabin partition printed from aluminum powder.

The result is a panel that is 50% lighter than a normal panel and a component that is planned to be trialled on an Airbus test aircraft in the final quarter of this year. Airbus head of emerging technologies and concepts, Peter Sander, said ALM represented an alternative to the production processes of milling, melting, casting and precision forging.

It also saves resources. It produces 5% in waste material compared with 95% from conventional machining. It also facilitates more efficient production of detailed, highly complex bionic parts.

The combination of ALM and bionic design creates parts that are up to 55% lighter than in previous manufacturing processes and improve output times by up to 90%. It is expected that printed aircraft parts could reduce costs by 75% overall and allow Airbus to achieve more rapid analysis of aircraft components.

Airbus' commitment to new 3D printing technology is revealed by its investment in the "Aerospace Factory" in Munich, Germany, which is being developed with several industry and research partners.

Based at the interdisciplinary Ludwig Bolkow Campus Ottobrunn/Taufkirchen, south of Munich, it will research and apply new 3D printing materials and production methods for the aerospace industry, with a focus on developing lightweight, cost-efficient and structurally complex propulsion systems.

With the goal of producing 3D mission control propulsion systems, each partner will contribute its expertise and

The new process uses industrial inkjet printers that decorate VTPs faster, more efficiently and with finer detail than traditional methods. "This is particularly interesting for customers whose liveries include photo-realistic motifs, complex patterns or modern art paintings with color gradients," Maurer said.

Britain's Thomson Airways was the launch customer for the new livery technology. The direct printer functions much like a traditional model, using a special inkjet head with nozzles that spray the three basic colours of cyan, magenta and yellow as well as black onto the VTP.

The ink exhibits good adhesion properties and bonds well onto existing aviation-specific paint systems. It is applied on the base-coat of the VTP and sealed with a clear coat. "This ensures good durability in extreme temperatures, ultra-violet radiation and erosion that aircraft paint must tolerate. Airbus foresees a time when an inkjet printer will be able to sweep across an aircraft painting its entire livery from nose to tail. ■

resources from component design, metal powder and materials production to additive manufacturing, process simulation and quality control.

The materials research laboratory belonging to Airbus Group Innovations, the group's central global research network, is a 4,500 square meter facility that will house 65 experts. They will apply 3D printing with other advanced manufacturing technologies to develop robust and environmentally friendly materials for aerospace components.

Airbus recently announced plans to 3D print half of its future airplane fleet and investing in the e Aerospace Factory and materials research laboratory is a major step towards that goal.

In a separate project, engineers from Airbus' paint shop in Hamburg have developed an industry first of "direct printing" of large and complex liveries on aircraft vertical tail planes (VTPs).

Painting an aircraft takes up to two days. Airbus' head of the A320 Family Paint shop, Ralph Maurer, said the common practice in the industry ranged from adhesive film to airbrush and stencil techniques. They have a few advantages and several disadvantages compared with new 3D printed technology.

Digital passports to make airport security obsolete?

By Tom Ballantyne in Barcelona

Borderless travel in the blink of an eye is on the technological horizon for the world's airlines. But its advocates must convince governments that biometric recognition systems are foolproof – and that will take time.

One promising development is Blockchain. If fully developed, it could revolutionise the airport travel experience. The forecast impact of the technology is the subject of research at the world's leading internet companies and technology conglomerates such as aviation communications provider, SITA.

In its purest form, Blockchain adopters would have their passports embedded in their smart phones or wearable devices, allowing secure, biometric authentication in their journeys across borders, thereby eliminating the need for multiple travel documents or storage of passenger details by various authorities.

Speaking at SITA's recent annual IT Aviation Summit in Barcelona , the company's chief technology officer, Jim Peters, said SITA envisages a time when seamless, secure travel would be available to all airline passengers. "To date, technology has provided SITA with the opportunity to do this at many airports and more than 30 of the world's borders," he said.

"But the underlying design of today's computer systems means there are multiple exchanges of data between various agencies and multiple verification steps in the process that reduces the ability to operate a single global system. Blockchain would make these processes obsolete.

Peters said it may be ten or

SITA chief technology officer, Jim Peters: developing system for seamless digital passenger clearance

twenty years away, but it would allow airlines to establish the true identities of all their passengers. At a summit session, the managing director of UK-based of Augmentiq, Matthew Finn, told delegates Europe had issued more than six million travel documents last year and that possibly more than 650,000 of them were provided to potentially false identities.

"These are genuine documents so frontline airline staff will not be able to identify them as counterfeit because they are not. They have been issued to people who do not exist," he said. "People can create a new identity, obtain a birth certificate and then fraudulently obtain a genuine [travel] document."

Finn said International Civil Aviation Organization (ICAO) statistics have identified a major shift from the use of counterfeit passports and visas to fraudulently obtained genuine documents. "Document fraud has been replaced by much more identity fraud. That's the big issue we confront," he said.

If it is adopted in the aviation industry, Blockchain adopters would create a verifiable "token" on their mobile phone or wearable device that contains their biometric and other personal data. In this vision of future travel, an airline passenger could travel worldwide and any authority could scan your face and your device to verify you are the person you say you are.

"Blockchain fundamentally changes the systems that create decentralized, global, tamper-proof, distributed databases. It is very early days yet and the issues of scalability and adoption rates need to be examined," said Peters. He added that the concept "looks as if it's got legs'.

"There has to be a pitch to governments that it would improve security. The proof points will have to be demonstrated. There has to be a business case for all stakeholders and that is cost," he said.

Francesco Violante, retiring chief executive of SITA, said: "Knowing that passengers prefer to use their own devices and self-service technology throughout the journey should encourage airlines, airports and governments to examine methods to transform the experience at security, border control and baggage collection."

Peters forecast: "The airline industry will not invent this. The financial industries, Amazon, Microsoft, all of these guys who create devices that are driving e-commerce, they want this too. They want better security and they want better experiences.

"They want to eliminate your 95 user IDs and passwords on line. They want to look at your device, have it recognize you and allow you to do transactions, use your credit card etc. We are looking to piggy back on these industries to see how these things develop."

"Blockchain is a database where transactions are recorded and confirmed anonymously. Whether it is used for currency or travel it is a record of events that is shared between multiple parties, but once information is entered into its system, it cannot be changed and privacy and security are by design.

"You can't put individuals' biometrics into a big database that hackers could go after. One of Blockchain's objectives is to make sure an individual's biometric information never leaves his or her phone or device. It verifies that the data on your phone or device has not been changed." ■

A third of all passengers rates security as their worst airport experience

SITA 2016 Passenger IT Trends Survey indicated airline passengers are becoming so comfortable with technology that they are choosing to use it rather than interact with people. SITA said 85% of passengers reported a positive travel experience in this year's survey compared with 80% last year.

Noticeably, passengers are happier at the steps of the journey where they have more control in managing their trip. At booking, which they can do online using a mobile or through an agent, 93% of respondents had a positive experience," the survey said.

"Passengers experience the most negative emotions during the security screening, passport control and baggage collection steps of the journey, with dissatisfaction peaking to nearly one third of all individuals surveyed at security. These also are the steps with the least number of self-service technology options."

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