

Connectivity • Excellence • Opportunities

January 2010

BRIDGING SKIES

Aviation In Singapore: Rising To The Challenge

Singapore Freeport
Taps Growing Asian
Art Market

Seletar Airport:
Harnessing Growth In
Business Aviation



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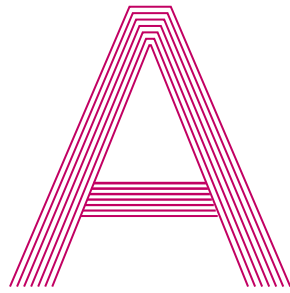
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Enabling opportunities through aviation



Aviation has been at the heart of Singapore's economic development. As a diverse trading economy closely linked with global markets, our ability to maintain connections has been a cornerstone of our success in building a vibrant air hub. In this spirit of connectivity, CAAS is pleased to launch *Bridging Skies*, a new monthly online magazine, which will offer our readers updates on CAAS as well as industry perspectives from key players.

In this inaugural special print supplement issue, we bring you an overview of Singapore's aviation landscape and how the aviation ecosystem is **Rising to the Challenge** (read page 2). Despite the many challenges, the aviation industry has continued to show encouraging growth and present new business opportunities. These opportunities include:

- **Shaping Seletar Airport towards Aviation Excellence** by developing it into a regional aviation hub that will support an anticipated growth in business aviation (read page 8);
- **Providing airside access that will enable a Safe Haven for Valuable Artwork** with the opening of Singapore Freeport (read page 6); and
- **Connecting the World** (read Page 10) to Singapore to further enhance Singapore's status as global air hub.

On this note, do log on to www.bridgingskies.com and sign up to receive monthly online updates on the latest news on CAAS and the aviation industry.

As our inaugural issue takes flight, your views and feedback are welcome. I hope you enjoy this first issue.

Have a good read.

Lydia Tan
Editor

Rising to the Challenge

Strategic developments in MRO services, Air Cargo and Logistics and the rise of Business Aviation see Singapore's aviation sector aligning itself with the demands of a rapidly evolving industry.

In the past three decades, Changi Airport and Singapore Airlines have become two of the most recognisable symbols of success in the development of Singapore as an aviation hub. Today, both Changi Airport and Singapore Airlines are well-known for their efficiency in operations and customer service. However, perhaps little known to some, Singapore is also a leading aerospace hub with aerospace Maintenance, Repair and Overhaul (MRO) services contributing 90 per cent of the more than S\$7 billion in industry returns for 2008 alone.

There is also the Air Cargo and Logistics sector, which sees Singapore's location between Asian powerhouses, China and India, as a strategic advantage, especially with the spotlight on international trade shifting from the west to the east.

Christopher Lim, Director, Aviation Industry, Civil Aviation Authority of Singapore (CAAS), credits the growth of Singapore's aviation industry to a mixture of hard and soft infrastructures that have been put in place. Says Lim, "Instead of looking at the progress of Singapore's aviation industry from a vertical standpoint, we should look at it as an ecosystem, where every sector is being widened and diversified."

Specifically, these sectors include MRO services, Air Cargo and Logistics, Business and General Aviation and Manpower Training.

Aerospace: Moving Up The Aviation Technology Chain

As the largest and most comprehensive MRO aerospace cluster in Asia, Singapore's strength as an aviation hub is in its ability to provide a suite of nose-to-tail capabilities. However, in order to move up the aviation technology ladder, Singapore must now cast its sights on aerospace manufacturing, value-added services, research and development, and design activities. "CAAS recognises that the aerospace sector provides both high-tech and high value-added services," says Lim, "and naturally we want to encourage this sector to grow." The signs are encouraging: the establishment of new facilities by Rolls-Royce,

Pratt & Whitney and Eurocopter at Singapore's Seletar Aerospace Park (SAP) attests to this burgeoning growth in aerospace manufacturing. Currently under development, which is slated for completion by 2018, the SAP will have a commercial complex for aerospace companies and a regional aviation campus housing a leading aeronautical university, training institutes and research facilities. All this will serve to inject more vibrancy to Singapore's aerospace landscape.

One company that has made its presence felt internationally by being the largest third party MRO solutions provider in the world, is ST Aerospace. Being one of the few MRO companies in the world with a global maintenance network, ST Aerospace has certainly raised Singapore's profile as an international aviation hub over the years since it extended its services from servicing military aircraft to commercial aircraft. The company's foray into commercial aviation has been extremely successful, enabling it to maintain a broad customer base that surpasses its MRO peers, both independent and airline-owned. Well-placed MRO locations in USA, Panama, Shanghai, Guangzhou, Xiamen, Scandinavia, UK and Madrid allow the company to service an international clientele, some of which include Delta Air Lines, Boeing, All Nippon Airways, US Airways and FedEx Express.

Singapore is also a leading aerospace hub with aerospace Maintenance, Repair and Overhaul (MRO) services contributing 90 per cent of the more than S\$7 billion in industry returns for 2008 alone.

Tay Kok Kiang, President, ST Aerospace, reflects that while it is important for Singapore to draw international players into its market, it is equally vital to have an international presence. "As a global brand, ST Aerospace has certainly helped raise Singapore's profile. Being internationally recognised also puts Singapore in a very special position by showing the world that it, too, can establish companies of significance."

Air Cargo And Logistics: An Inter-Modal Hub

Although 2009 saw air cargo figures dip due to the global economic slump, this has been viewed as a temporary setback and a revival is expected, with China and India playing a major part in changing air transport trends over the next few years. Says Louis Tan, CEO and Chairman, Jett8 Airlines Pte Ltd, a local private air cargo carrier, "Southeast Asia, China and India largely have not suffered as severe a downturn as the West. As such, the future of growth in air cargo will be more intra-Asia in nature," he says. "If all the countries in Asia work at optimum levels, an overall growth in airfreight and passengers can be generated to sustain our airlines."

Another way of tapping into the Asian market is to make use of Singapore's other transport routes and focus on transshipment. Lim adds that "CAAS is looking at enhancing its inter-modal capabilities for the air cargo industry. This will mean bridging air, sea and land capabilities, so that Singapore will have a competitive advantage in the region." By integrating the various transport routes and streamlining processes and regulations required for transshipment, Singapore will strengthen its position as a leading transport hub.

In identifying a growing art market in Asia, this month sees the opening of Singapore Freeport (see page 6), the largest high value cargo storage facility for fine art and high value collectibles, specifically



catering to a growing niche of regional art connoisseurs.

Fueling demands of the air cargo sector is Singapore's open skies policy, which has grown with increased connectivity between Southeast Asia and Southwest Pacific. More than 100 Air Services Agreements (ASAs) with countries around the world have given our airlines access to new markets. SIA Cargo, the cargo carrier arm of Singapore Airlines, has taken advantage of the ASAs to expand its portfolio. "It is part of our business strategy to explore new markets with growth opportunities," says Goh Choon Phong, President, SIA Cargo.

Add to the mix the growing number of Low Cost Carriers (LCCs), private airfreight companies, as well as full service carriers increasing their network, and Singapore's standing as a global air hub has certainly taken the aviation spotlight (see page 10).

Business Aviation: A New Frontier

Positive forecasts in Asia-Pacific have seen Singapore upgrading its aviation facilities to meet the projected growth of business aviation traffic in the region. Defined as air travel for corporate executives and high net worth individuals who typically travel by private plane or corporate jet, business aviation essentially eliminates travel hassles such as delayed flights and congestion at international airports. It offers wider scope by providing more destinations compared to commercial flights, thereby offering this niche of

travellers the efficient convenience of "point-to-point" travel, with time savings.

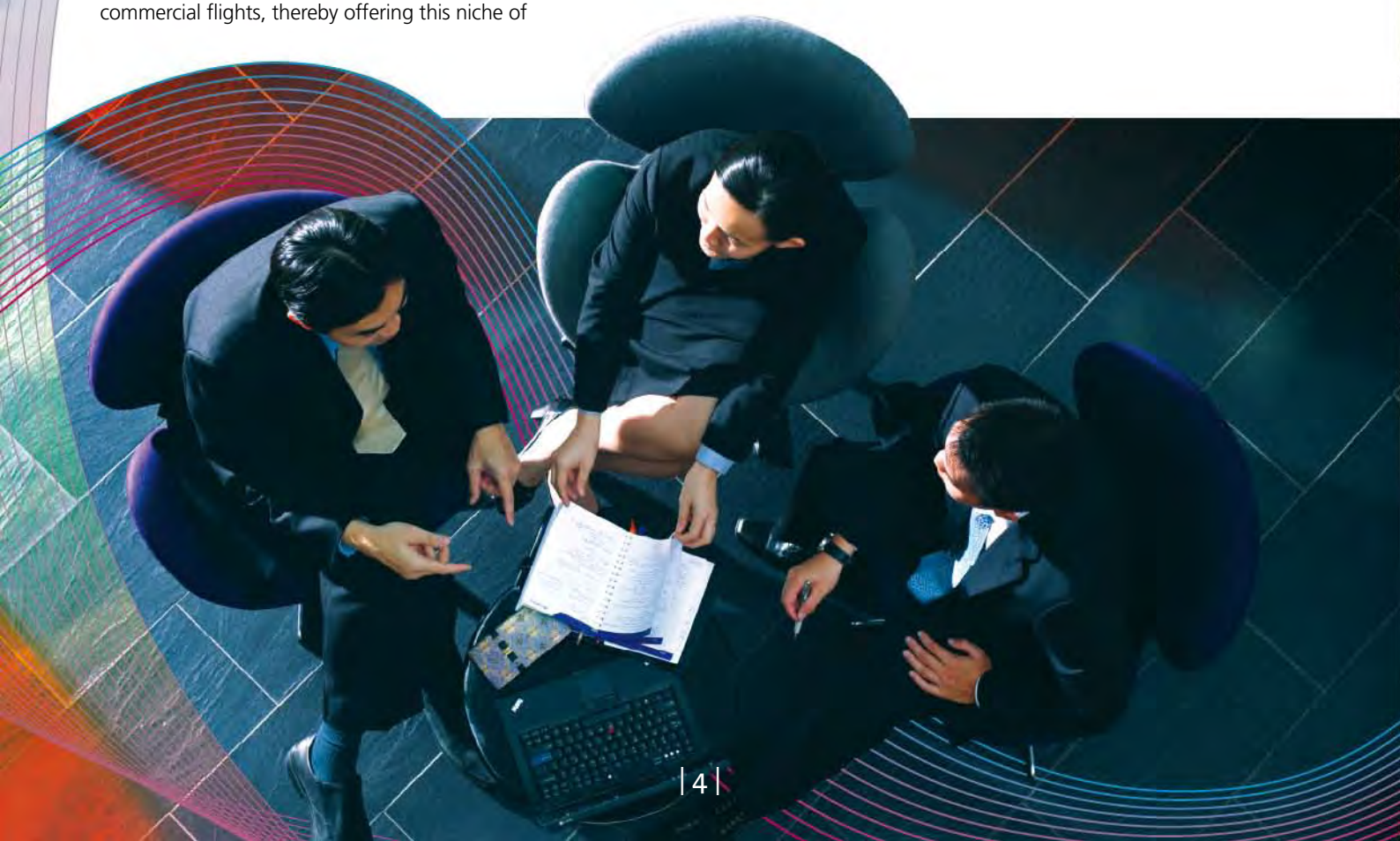
To cater to a rapidly growing business aviation sector, Seletar Airport will be undergoing an extensive makeover to enhance its status as an airport of choice for high net worth individuals and corporations with corporate jets by facilitating smoother point-to-point air travel between important business centres. Within Seletar Aerospace Park where Seletar Airport is located, plans are underway to develop business and general aviation and MRO activities to attract more business and talent (see page 8).

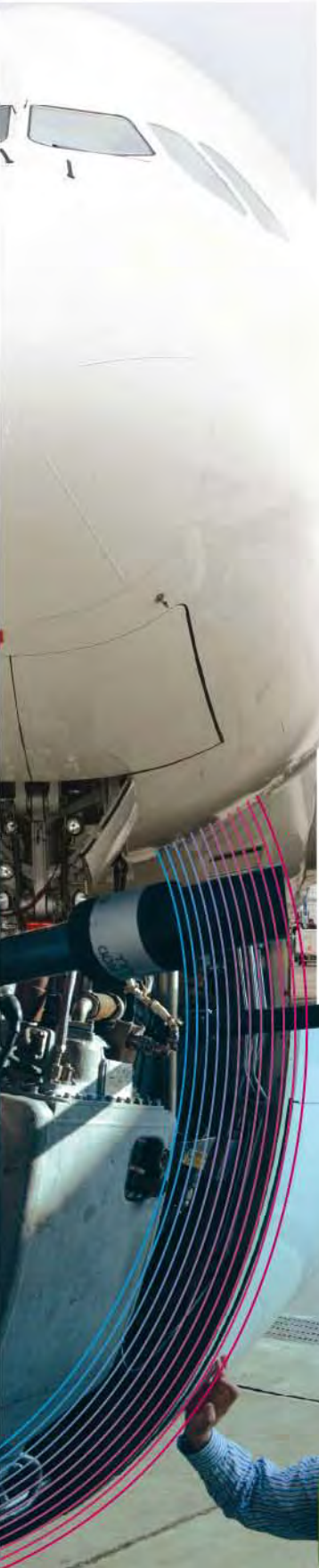
To build on this, CAAS will be looking to take advantage of the country's strong financial infrastructure to develop Seletar Airport and Seletar Aerospace Park into a regional business aviation hub. "Singapore is a sweet spot when one considers its position in relation to Asia's affluent markets, in particular China and India. A flight path of five to seven hours can cover these great markets both ways," says Lim. "With the development of the country's business aviation sector, combined with financial and business expansion, Singapore has the potential to grow into a one-stop shop for banking, business, and with the opening of the integrated resorts, entertainment."

Training: Holistic Approach To Grooming Talent

Good human resource is what drives success. The growth of the aviation industry is invariably

Instead of looking at the progress of Singapore's aviation industry from a vertical standpoint, we should look at it as an ecosystem, where every sector is being widened and diversified.





underpinned by efficient manpower. With more international players entering the aviation industry as the Seletar Aerospace Park opens, Lim feels that quality-trained manpower will be “the glue that holds the industry together”.

Institutions such as Temasek Polytechnic (TP) are grooming a new generation of skilled and talented manpower to meet industry demands. Paul Yap, Course Manager for the Diploma in Aviation Management & Services, TP, reveals that TP’s aerospace programmes have been increasingly successful in bridging the gap between academic and practical training. “This not only enables the smooth transition of the engineer from school to full fledge status, but also merges the academic with the practical,” explains Yap.

CAAS is also looking into attracting talent and building the manpower pool by working with individuals, companies and training institutions. The objective is to develop a competent workforce with the relevant skills to enable the growth and development of Singapore’s aviation industry.

CAAS also intends to facilitate the launch of higher learning programmes such as the MBA (Aviation) with Embry-Riddle Aeronautical University. Lim adds that “this will provide not just for local industry needs but also create a centre of excellence in the field of research, aviation management or leadership.”

This holistic approach to training also includes commercial pilot licensing. Modernised commercial pilot training in a multi-crew environment is now made possible with ST Aerospace Training Academy’s (STATA) Multi-crew Pilot License (MPL) programme. Comprising 80 per cent simulator-based training, STATA’s MPL programme is the first of its kind to train pilots in a simulator of the actual aircraft type – in this case, an Airbus A320 flight simulation device – as early as possible.

By enabling commercial training capabilities in Singapore, Adrian Cheok, Vice President,

STATA and Commercial and Operations Director, MPL Programme, feels that the MPL completes the picture of Singapore as an aviation hub.

“Singapore has a huge reputation in the way it does things as well as in its aviation capabilities, and ST Aerospace is also a well known company in the region,” says Cheok. “We feel that we can ride on these two aspects, and with CAAS’ help, make the MPL programme the best in the region, if not the world.” Cheok adds that with the MPL being more internationally accepted now, the success of the programme will propel Singapore into a frontrunner position.

Towards A Greener Aerospace Industry

Rising global temperatures and carbon emissions are a major concern for the fuel-reliant aviation industry. Although making up two per cent of global CO₂ emissions, aviation carbon emissions is growing at an increasing rate. The International Civil Aviation Organization (ICAO) and its Contracting States are committed to addressing aviation emissions, while Singapore, too, is looking to green alternatives to create an efficient, environment-friendly industry.

The exploration of fuel alternatives such as biofuel is one such example, while the implementation of solar panels at Changi Airport’s Budget Terminal will cut some of the airport’s dependence on the main power grid. Aircraft too, have not been exempt from the green revolution, with SIA Cargo doing their part by streamlining flight operations to minimise fuel burn without compromising safety, and Singapore Airlines incorporating the Airbus A380 – the world’s cleanest, greenest and quietest large passenger aircraft of its kind – into its fleet.

It is worth noting that the global air transport industry is the only sector thus far to announce its plans to address climate change and has committed to carbon-neutral growth by 2020, and carbon-reduction growth by 2050. This degree of commitment is something no other industry has yet to achieve. In order to reach these goals, aviation protection efforts have to be a priority. CAAS will work closely with the sector to ensure everyone plays a part towards reducing the aviation carbon footprint.

The Sky Is The Limit

With sound business strategies and well-placed investments, Singapore’s aviation industry can only go from strength to strength. The future will likely bring more competition into the various sectors, but CAAS is confident that Singapore will meet, and surpass these challenges to take the Singapore brand to greater heights in aviation. ////////////////



Safe Haven for Valuable Artwork

Singapore Freeport, the world's largest high value cargo storage facility is set to cater to a burgeoning art market in Asia, further expanding the value chain of Singapore's air cargo and logistics industry.



Every art connoisseur knows that discovering – and finding a secure place to store – an investment-worthy artwork are equally important. That's why collectors of fine objets d'art will appreciate the resource provided when Singapore Freeport opens its doors later this month.

The Singapore Freeport is the largest high value cargo storage facility dedicated to the shipping, storage display and trading of fine art and high value collectibles in the world. More importantly, it is the first of its kind in Asia, where there is a huge demand for such specialised facilities and services, especially with the rising number of high net worth individuals and their appetite for fine collectibles.

In another first, the Freeport is the only 24/7 facility in the world to offer high security storage of valuables. Coupled with Singapore's international connectivity and world-class infrastructure, it has the potential to increase the transshipment volume of high value goods through Singapore, expanding the value chain of the nation's logistics industry. Opportunities are also abundant in downstream activities like aviation, art transaction and storage of gold by banks and high net worth clients.

Based on the round-the-clock free trade model of the Swiss Freeports in Zurich and Geneva, Singapore Freeport is supported by a slew of government agencies like Singapore Economic Development Board (EDB), and has shareholders that include the Singapore National Arts Council and the National Heritage Board of Singapore.

The Civil Aviation Authority of Singapore (CAAS) was also roped in as one of the signatories for the operating framework of the Freeport. CAAS granted airside access and will facilitate the movement of goods within the restricted

area as well as established special procedures for conveyors to receive or hand over goods to be stored in the Freeport. Sri Nair, General Manager, Singapore Freeport, says, "Cooperation from CAAS makes it possible for our clients and tenants to operate in a safe and secured environment."

So far, the company has invested S\$70 million in its 22,500-square-metre storage facility (equivalent to five football fields) and the second phase, to be completed in 2014, will offer another 25,000 square metres of space. Pushing the green initiative, the Freeport also boasts eco-friendly features. It will be one of the first buildings in Singapore to fully integrate systems for solar power, water recycling and energy efficiency, utilising landscaping features and other high technology for climate-control systems.

Location wise, the Freeport's prime position near Changi Airport provides direct access to cargo and passenger terminals, making it easy to safely transfer valuables and offering convenience for VIP clients flying into the city-state to be whisked directly to the facility.

One of the most important aspects for such a facility is security and Singapore Freeport measures up strongly on this score – it boasts a state-of-the-art system that employs laser, biometric and radio frequency identification (RFID).

According to Nair, Singapore Freeport is a "perfect partner for international fine art collectors and dealers, auction houses, diamond dealers, museums and sovereign state collections, as well as international banks and family offices looking for a safe, stable and secure offshore location to store and trade their valuable assets, collections and treasures".

As a testament to the high demand for such a facility, Christie's Fine Art Storage Services (CFASS), provider of customised storage solutions for fine art, antiques and collectibles, has already taken up 40 per cent of the space, while 95 per cent of Phase I has been booked. "It is a significant endorsement of our business model," says Alain Vandendorre, President and Co-founder of Singapore Freeport. "Singapore Freeport will be the ultimate Fort Knox state-of-the-art facility for the finest world collections and will strengthen Singapore's reputation as one of the world's leading and secured financial centres." ////////////////

Shaping Seletar Towards Aviation Excellence

Seletar Airport is pushing for a big slice of the business aviation sector and recognition as a prominent regional airport, with ambitious upgrading plans and a string of value-added aviation activities and services.

In Asia Pacific, besides Changi Airport, Singapore's Seletar Airport plays a pivotal role as the country's other airport in meeting growing business aviation needs. With the increasing presence of multi-national corporations and high net worth individuals in Singapore, coupled with the opening of world-class integrated resorts in the country and major international events such as the Formula 1 race, more flight traffic is expected through its gates.

Business aviation, also known as business jet operations for corporations and individual

travellers, makes congestion at international airports and delayed flights a thing of the past. On top of breezing through procedural hassles, business aviation offers greater flexibility by providing more destinations compared to commercial flights. In turn, corporate executives and high net worth individuals who usually travel via private plane or corporate jet, enjoy privacy as well as the convenience and efficiency of "point-to-point" travel, and flexibility in timing.

As it stands, reputed organisations and companies in the business aviation industry have established themselves at Seletar Airport, offering a



range of activities such as maintenance, repair and overhaul (MRO), re-fuelling, ground handling and even flight training.

Ensuring that Seletar Airport stays on top of its game is the Civil Aviation Authority of Singapore (CAAS), whose key role includes maintaining high safety standards over aircraft and aerodrome operations, providing air navigation services, and promoting Seletar Airport among the local and international aviation community by creating awareness and enhancing further growth opportunities.

Major Upgrades at Seletar Airport

Since 2008, Seletar Airport has been undergoing extensive works to upgrade and expand the airport in order to better serve a burgeoning business aviation sector, as well as a range of aviation activities at Seletar.

Says Meaveen Lee, Assistant Director, Business Aviation/General Aviation, CAAS, "These upgrades will also enhance capacity significantly, thereby allowing a wider variety and bigger volume of aircraft to pass through Seletar Airport."

Says Lee, "One major development is an increase of the overall airport land by two-thirds from its current 93-hectares. To be completed

The integrated aviation industry cluster at Seletar Airport and SAP will help drive traffic to the airport while creating multiplier effects for other economic sectors. This will contribute to the further growth of Singapore's aviation sector and economy.

◀ Artist's impression of the new Seletar Airport Control Tower

by 2014 over several phases, this expansion will accommodate more flights and facilities like additional parking space for various sizes of aircraft."

New taxiways are currently being built to facilitate more movement and enhance operational efficiency. Meanwhile, the runway will be extended by 200m to 1,836m by 2012. This extension will allow Seletar Airport to receive larger aircraft and also enables a 12,000-kilometre flying range for aircraft to reach the Middle East and farther destinations like certain parts of Europe and Africa.

By 2011, new Air Traffic Control (ATC) facilities will be operational. This includes a new control tower which will enhance safety and service levels at Seletar Airport. In addition, by 2014 the airport will also be equipped with an Instrument Landing System (ILS), a ground-based instrument approach that provides precision guidance to approaching and landing aircraft. The ILS will contribute to the enhancement of safety levels and allow aircraft operations in all weather conditions.

Seletar Aerospace Park: Attracting Business and Talent

On a broader scale, Seletar Airport's expansion is all part of a larger shift within the local aviation scene to meet the growing demands of the aerospace sector. The airport is located within the Seletar Aerospace Park (SAP), a 300-hectare area, which plays host to a cluster of companies specialising in various aviation-related activities.

Currently, the SAP is under development. With completion expected by 2018, the aerospace park will have a commercial complex for aerospace companies and a regional aviation campus, which will house a leading aeronautical university, training institutes and research facilities. All these upgrades are made possible through a collaborative effort between CAAS and Changi Airport Group (CAG), joint master planner of the airport land, JTC Corporation, developer of the industrial land, Singapore Economic Development Board (EDB), which assumes promotional and marketing roles for the SAP.

Looking ahead, with the completion of these upgrades, the integrated aviation industry cluster at Seletar Airport and SAP will offer a comprehensive package for private air travellers and prospective companies, among others, with Seletar Airport better poised as a business aviation airport of choice, on par with other regional players.


Observes Lee, "This helps drive traffic to the airport while creating multiplier effects for other economic sectors, which will contribute to the further growth of Singapore's aviation sector and economy." //

On a broader level, Seletar Airport's expansion is all part of a larger shift within the local aviation scene to meet the growing demands of the aerospace sector. The airport is located within the Seletar Aerospace Park (SAP), a 300-hectare area, which plays host to a cluster of companies specialising in various aviation-related activities.

Connecting the World

As the economy slowly recovers, Singapore's connectivity and status as a global air hub are faced with new challenges as well as opportunities.





It goes without saying that the aviation industry was one of the first sectors to be hit by the global economic downturn. Two years on, the industry is making a relatively quick recovery in the Asia-Pacific region as the global economy shows signs of a gradual rebound.

This is good news for Singapore's air connectivity. Many airlines, which had cut back on their services in the past year in view of falling demand and yield, have already begun reinstating services. In this regard, Singapore's superior air connectivity with the key growth markets in the region, namely China and India, will allow local aviation industry players to capitalise on new business opportunities in such markets. Looking ahead, the Civil Aviation Authority of Singapore (CAAS) aims to position Singapore as a key hub for those travelling beyond Singapore.

The jewel in the crown of the country's aviation industry is Changi Airport. Since its launch in 1981,

the air hub has grown from strength to strength. Today, it is the world's seventh busiest airport in terms of international traffic.

Despite the economic recession, passenger and air traffic at Changi has steadily increased in the last six years. In 2004, it was served by 74 airlines operating 3,700 weekly scheduled flights to 174 cities in 55 countries. Five years later in December 2009, the figures rose to 86 airlines operating more than 4,900 weekly scheduled flights to 201 cities in 60 countries. The Airport's four terminals can handle more than 70 million passengers per annum, who have had the opportunity to experience its myriad world-class facilities and amenities.

However, the dawn of a new decade has brought fresh challenges for the premier air hub. Among them are the competition from other modern mega airports in the region, which are also looking to establish themselves as regional or global hubs; the launch of long-haul aircraft that fly point-to-point without the need for intermediate hubs like Changi; the emergence of global airport companies; and gradual consolidation of airlines into mega carriers in recent years. All these have made it critical for the air hub to constantly reinvent itself to remain relevant to its customers and partners.

In this respect, the players in Singapore's aviation industry have been busy. Last July, CAAS was restructured, while Changi was corporatised into Changi Airport Group (CAG). Most industry experts are optimistic, saying that these changes will sharpen the focus of these two organisations.

Indeed, this repositioning will help Changi leverage on its competitive advantages, such as strong connectivity, high safety standards, efficiency, a world-class infrastructure and award-winning facilities.

As it is, CAG is working to improve Changi's air network by attracting airlines to launch new flights, increasing city and country links to Singapore. CAAS has helped by establishing a liberal aviation



policy so that airlines have full flexibility to respond to market opportunities. This will enable passenger and shippers to have the widest possible travel and flight options at competitive rates, so that Singapore continues to be the transfer hub of choice for international travellers and shippers.

Presently, the nation has Air Service Agreements with more than 100 countries and more than 30 Open Skies Agreements. It also advocates the liberalisation of air services within ASEAN to support the growing trade, tourism and people flows within the region. These will have a positive impact on Changi Airport. Yam Kum Weng, Executive Vice President, Air Hub Development, CAG, says, "The liberalisation of air services in the region will provide new growth opportunities and enable airlines to capitalise on demand for travel in both new and established markets."

For their part, airlines and cargo carriers are realising the growth potential of emerging markets like Asia and the Middle East. Singapore Airlines, one of the first full carriers to reinstate services after cutting back on them during the downturn, is launching twice-daily flights to Tokyo's Haneda airport in October.

Nicholas Ionides, Vice President, Public Affairs, Singapore Airlines, says, "We will enhance frequency to existing markets and launch services to new destinations whenever feasible. In addition, we will continue to take delivery of new aircraft such as the Airbus A380 and Airbus A330."

Another factor that has significantly contributed to Singapore's connectivity is the entry of low cost carriers (LCC), which accounts for 20 per cent of Singapore's total passenger traffic. The LCC sector in the Republic has remained resilient and has continued to improve, despite the recession that has affected the airline industry worldwide.

An area of notable growth is the private airfreight industry. The 2007 launch of Jett8 Airlines Pte Ltd, the nation's first privately-owned all-cargo carrier, has paved the way for private airfreight companies to tap on Singapore's logistics and warehousing infrastructure for their transshipment to other parts of the world. Louis Tan, Chief Executive Officer and Chairman, Jett8 Airlines Pte Ltd, believes that the country has the potential to be the air hub for air cargo. "Singapore is already a brand name in the aviation industry for warehousing, security, speed and efficiency," he says. "Jett8 wants to value-add this proposition by creating our own niche market."

With the number of LCCs and private airfreight companies growing, and full service carriers expanding their network, Singapore is in prime position to maximise various opportunities for long-term success as a global air hub. ////////////////

Singapore Aviation Academy Programme Calendar

AVIATION MANAGEMENT COURSES

Programmes	Dates
Aircraft Accidents Crisis Preparedness and Management Conference (co-organised with Ministry of Transport, Singapore) NEW	22 – 24 Mar 2010
International Conference on Air Transport, Air Law and Regulation (co-organised with the Institute of Air & Space Law, McGill University & Center for International Law, National University of Singapore) NEW	24 – 26 May 2010
ICAO-SAA Regional Seminar for Training Directors (co-organised with International Civil Aviation Organization) NEW	24 – 25 Jun 2010
Aviation Crisis Communication Workshop (Elective course for Dip CAM) NEW	6 – 9 Jul 2010
Bachelor of Aviation Management (BAvMan) by Distance Learning (co-organised with Massey University, New Zealand)	3 intakes a year Feb, Jul & Nov
Master of Management (Aviation) by Distance Learning (co-organised with Massey University, New Zealand)	2 intakes a year Feb & Jul
Postgraduate Diploma in Aviation by Distance Learning (co-organised with Massey University, New Zealand)	2 intakes a year Feb & Jul
Graduate Diploma/Certificate in Aviation Management (AM) (co-organised with National University of Singapore)	17 May – 30 Jul 2010; 16 May – 29 Jul 2011
Graduate Diploma/Certificate in Airport Engineering (AE) (co-organised with Nanyang Technological University, Singapore)	28 Jun - 10 Sep 2010
Diploma in Civil Aviation Management (Dip CAM)	Subject to date of compulsory course (CAMP) & elective courses
Civil Aviation Management Programme (Compulsory course for Dip CAM)	19 – 30 Jul 2010; 11 – 22 Jul 2011
Airport Terminal Operations and Management	7 – 18 Jun 2010; 4 – 15 Oct 2010
Airport Ramp Operations and Management	5 – 23 Apr 2010; 11 – 29 Apr 2011
Airport Ramp Safety	10 – 14 May 2010; 6 – 10 Dec 2010
Airport Certification	30 Aug – 7 Sep 2010; 15 – 23 Aug 2011
International Air Law: Concepts & Applications (Elective course for Dip CAM)	17 – 21 May 2010; 23 – 27 May 2011

AIRPORT EMERGENCY SERVICES COURSES

Programmes	Dates
Radiation Hazards and Safety Inspection Workshop NEW	8 – 12 Mar 2010; 7 – 11 Mar 2011
Fire Service Safety Audit NEW	13 – 17 Sep 2010; 24 – 28 Oct 2011
Watchroom Operations & Incident Reporting Workshop	6 – 9 Sep 2010; 19 – 22 Sep 2011
Dangerous Goods Inspector Workshop	6 – 13 Dec 2010; 5 – 12 Dec 2011
Fire Investigation Workshop	8 – 12 Nov 2010; 14 – 18 Nov 2011
Fire Safety Inspection Workshop	27 Sep – 1 Oct 2010; 28 Feb – 4 Mar 2011
Emergency Management Workshop	28 Jul – 3 Aug 2010; 2 – 8 Aug 2011
Senior Fire Officer	3 – 27 May 2010; 6 Sep – 1 Oct 2010
Operational Fire Command and Control	26 – 30 Apr 2010; 21 – 25 Feb 2011
Fire Safety Management Workshop	17 – 21 May 2010; 20 – 24 Jun 2011
Bulk Fuel Installations Fire Management Workshop	19 – 23 Jul 2010; 18 – 22 Jul 2011
Military Aircraft & Helicopter Rescue and Fire-fighting Strategies & Tactics	17 – 21 May 2010; 18 – 22 Oct 2010
Hazardous Materials Operations	29 Mar – 1 Apr 2010; 4 – 8 Jul 2011
Strategies and Tactics for Hazmat Incident Management Workshop (co-organised with Texas Engineering Extension Service (TEEX), Texas A&M University System, US)	11 – 15 Oct 2010; 10 – 14 Oct 2011
Strategies and Tactics in Internal Fire Fighting	12 – 16 Apr 2010; 13 – 17 Jun 2011
Incident Command and Control Workshop (co-organised with TEEX, Texas A&M University System, US)	18 – 22 Oct 2010; 17 – 21 Oct 2011
Fireground Leadership	10 – 14 May 2010; 3 – 7 Oct 2011
Airport Fire Officer	1 – 26 Mar 2010; 10 Aug – 3 Sep 2010

AVIATION SAFETY AND SECURITY COURSES

Programmes	Dates
Safety Oversight Inspectors (Air Navigation Services) NEW	10 – 14 May 2010
Workshop on Crisis Management in Aviation Security (Elective course for Dip CAM) NEW	10 – 14 May 2010
Quality Management Principles and Practices in an Aviation Environment (co-organised with JAA Training Organisation) NEW	3 – 4 Jun 2010
State Safety Programme NEW	7 – 10 Jun 2010; 6 – 9 Sep 2010
Regulatory Auditing Techniques Training (co-organised with JAA Training Organisation) NEW	7 – 10 Jun 2010
Dangerous Goods Training for CAA staff and Airport Authorities (co-organised with JAA Training Organisation) NEW	14 - 18 Jun 2010
Auditing Techniques in Relation to Flight Personnel Licensing (co-organised with JAA Training Organisation) NEW	21 - 25 Jun 2010
Airworthiness Training Programme (co-organised with JAA Training Organisation) NEW	28 Jun – 2 Jul 2010
ICAO GSI Training – Personnel Licensing NEW	4 – 19 Oct 2010; 3 – 18 Oct 2011
Aircraft Accident Investigation Techniques (AAI) and Management	8 – 19 Mar 2010; 17 – 28 Jan 2011
Seminar on Accident Site Hazards and Bloodborne Pathogen	19 Mar 2010; 28 Jan 2011
Aviation Medicine (co-organised with the International Academy of Aviation and Space Medicine)	13 – 17 Sep 2010; 12 – 16 Sep 2011
EASA Maintenance Requirements – Part 145/Part 66 (co-organised with Lufthansa Technical Training)	9 – 12 Nov 2010
Integrated Safety Management Systems – Achieving World Class Safety Standards (Elective course for Dip CAM)	15 – 26 Mar 2010; 22 Nov – 3 Dec 2010
ICAO Safety Management Systems	31 May – 4 Jun 2010; 30 Aug – 3 Sep 2010
Fundamentals of Safety Management Systems	5 – 8 Jul 2010; 11 – 15 Jul 2011
Workshop on Human Factors in Aviation	6 – 10 Dec 2010
Safety Oversight Managers (Elective course for Dip CAM)	3 – 19 May 2010; 16 May – 1 Jun 2011
Safety Oversight Inspectors (Comprises of compulsory module and one elective module)	11 – 29 Oct 2010; 3 – 21 Oct 2011
Airline Security Operations (co-organised with the International Air Transport Association)	5 – 9 Apr 2010
Airport Security Operations (co-organised with the International Air Transport Association)	30 Aug – 3 Sep 2010

AIR TRAFFIC SERVICES COURSES

Programmes	Dates
Air Traffic Services Resource Management and Training Workshop	1 – 12 Feb 2010; 7 – 18 Feb 2011
SAR Administrators	22 Nov – 3 Dec 2010; 21 Nov – 2 Dec 2011
Air Traffic Services Safety Management and Investigation	14 – 25 Jun 2010; 13 – 24 Jun 2011
Safety Audits of Air Traffic Services	12 – 16 Apr 2010; 8 – 12 Nov 2010
Human Factors in Air Traffic Services Workshop	8 – 12 Mar 2010; 7 – 11 Mar 2011
Aeronautical English – Meeting New ICAO Requirements	12 – 30 Jul 2010; 11 – 29 Jul 2011
Aeronautical English – Train the Testers Workshop	19 – 23 Apr 2010; 2 – 6 Aug 2010
Aeronautical Search and Rescue Operations	18 Oct – 3 Dec 2010; 17 Oct - 2 Dec 2011
On-the-Job Training (OJT) Instructors	1 – 5 Mar 2010; 20 – 24 Sep 2010
ICAO Pans-Ops Instrument Procedures Design	27 Sep – 19 Nov 2010; 12 Sep – 4 Nov 2011
Basic Aeronautical Information Services	4 – 14 Oct 2010; 3 – 13 Oct 2011
Advanced Aeronautical Information Services	14 – 20 Oct 2010; 13 – 19 Oct 2011

Please note that dates are subject to change. For a full listing of SAA's programmes, please refer to www.saa.com.sg



CAAS
Civil Aviation Authority of Singapore

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