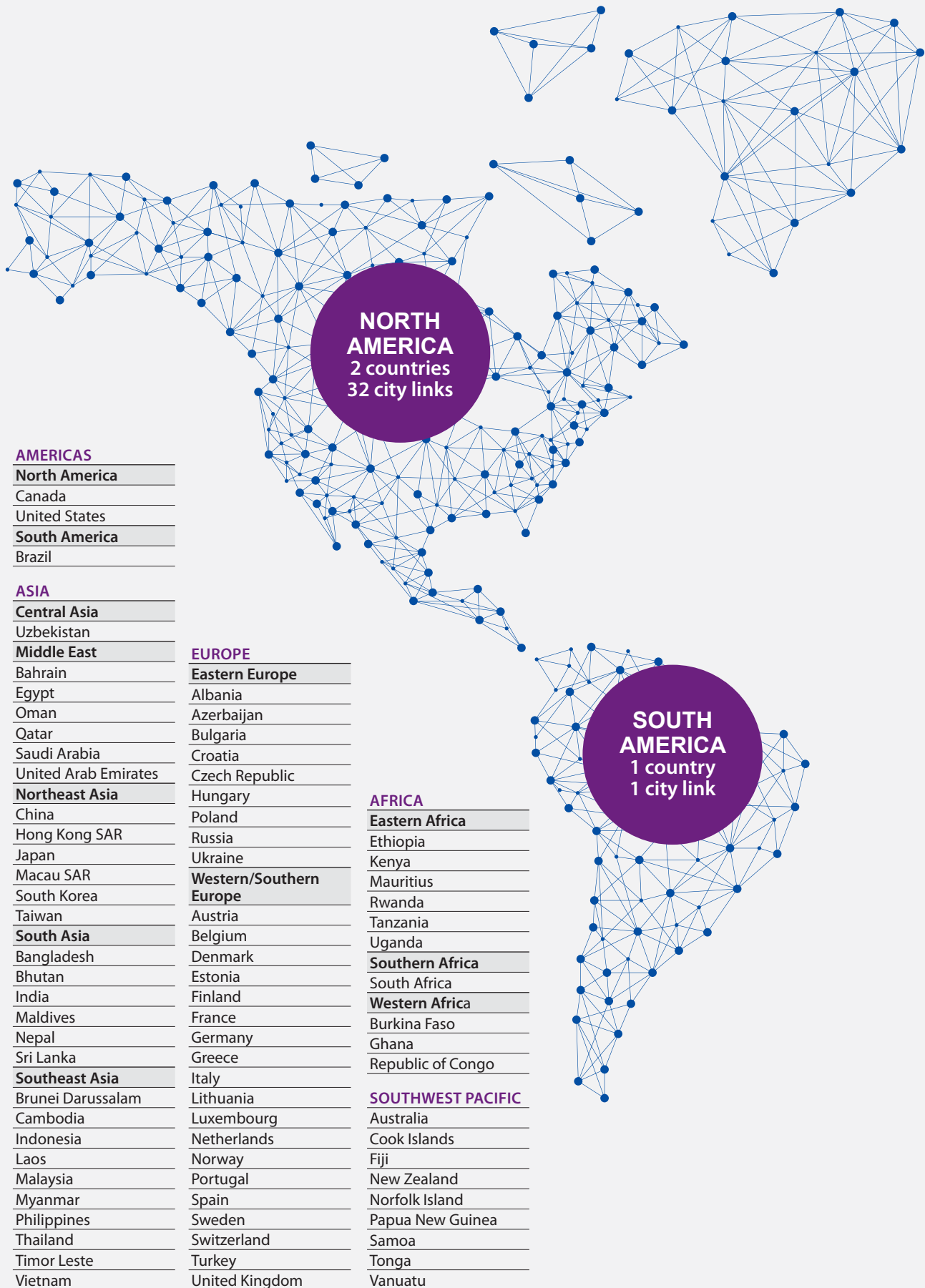


# BUSINESS & OPERATIONS REVIEW





# GLOBAL CONNECTIVITY



## AMERICAS

### North America

Canada

United States

### South America

Brazil

## ASIA

### Central Asia

Uzbekistan

### Middle East

Bahrain

Egypt

Oman

Qatar

Saudi Arabia

United Arab Emirates

### Northeast Asia

China

Hong Kong SAR

Japan

Macau SAR

South Korea

Taiwan

### South Asia

Bangladesh

Bhutan

India

Maldives

Nepal

Sri Lanka

### Southeast Asia

Brunei Darussalam

Cambodia

Indonesia

Laos

Malaysia

Myanmar

Philippines

Thailand

Timor Leste

Vietnam

## EUROPE

### Eastern Europe

Albania

Azerbaijan

Bulgaria

Croatia

Czech Republic

Hungary

Poland

Russia

Ukraine

### Western/Southern Europe

Austria

Belgium

Denmark

Estonia

Finland

France

Germany

Greece

Italy

Lithuania

Luxembourg

Netherlands

Norway

Portugal

Spain

Sweden

Switzerland

Turkey

United Kingdom

## AFRICA

### Eastern Africa

Ethiopia

Kenya

Mauritius

Rwanda

Tanzania

Uganda

### Southern Africa

South Africa

### Western Africa

Burkina Faso

Ghana

Republic of Congo

## SOUTHWEST PACIFIC

Australia

Cook Islands

Fiji

New Zealand

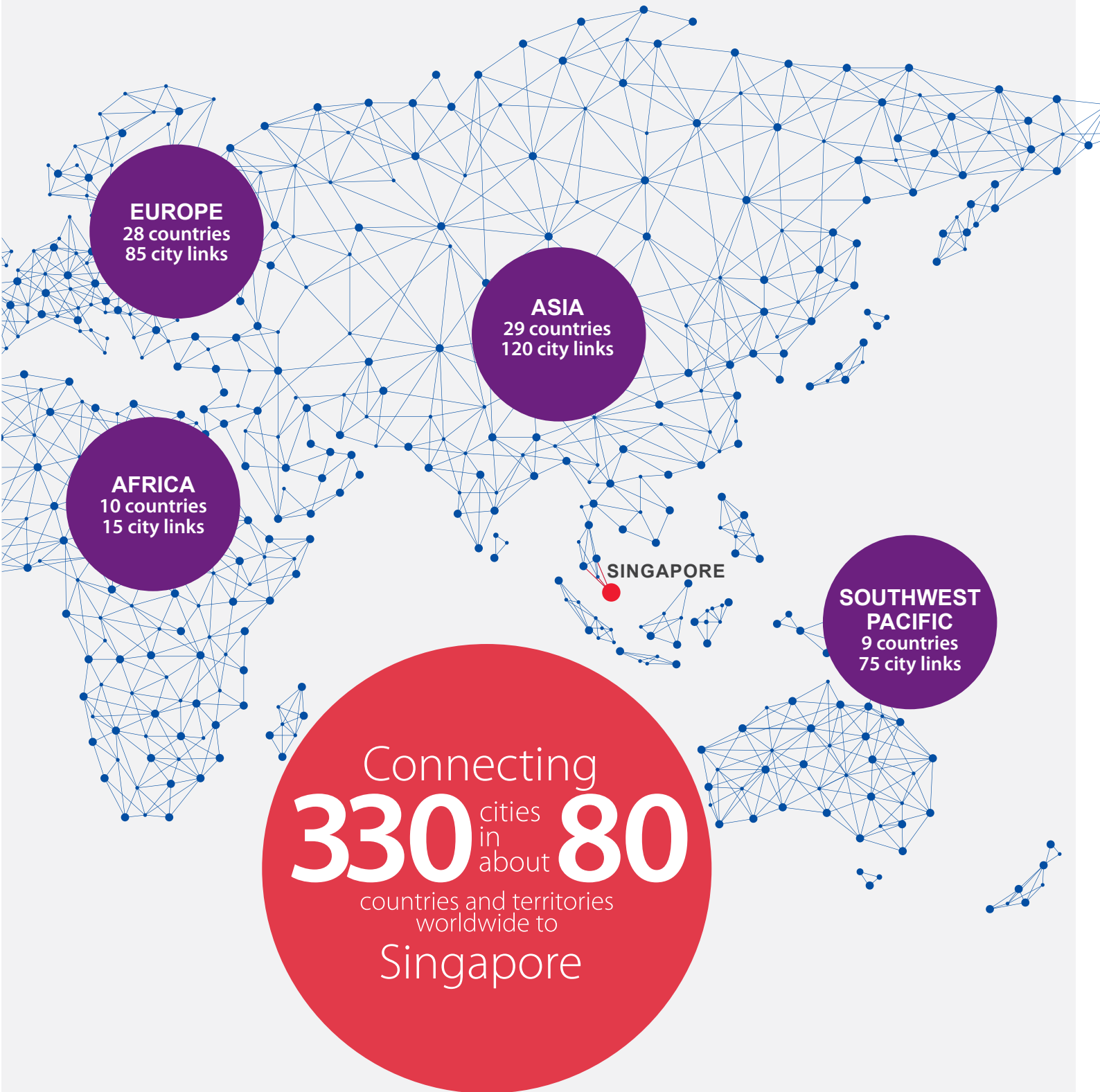
Norfolk Island

Papua New Guinea

Samoa

Tonga

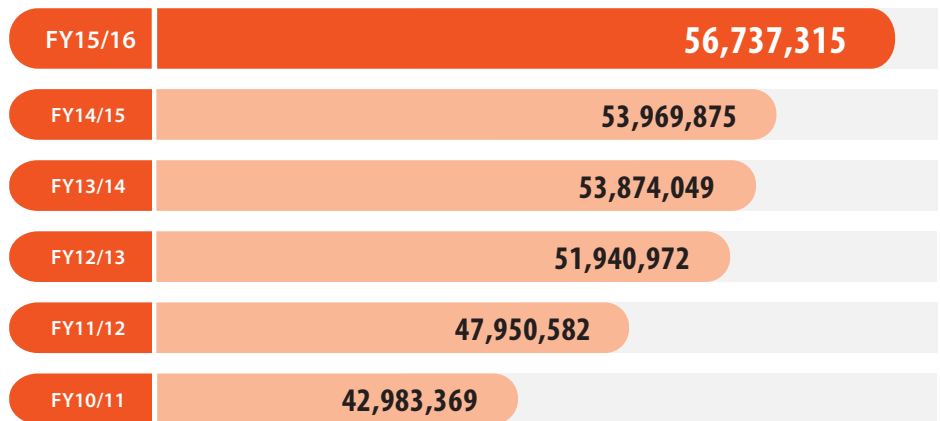
Vanuatu



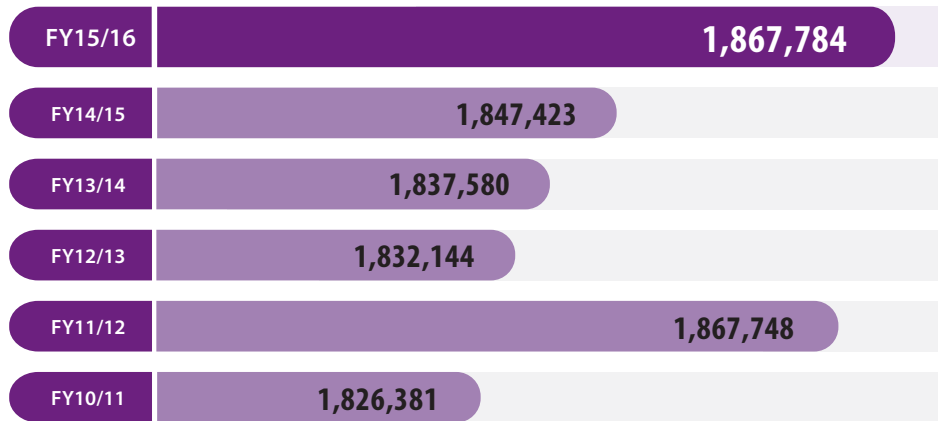
Figures include both physical and codeshare links  
(As of 31 March 2016)

# AIR TRAFFIC STATISTICS

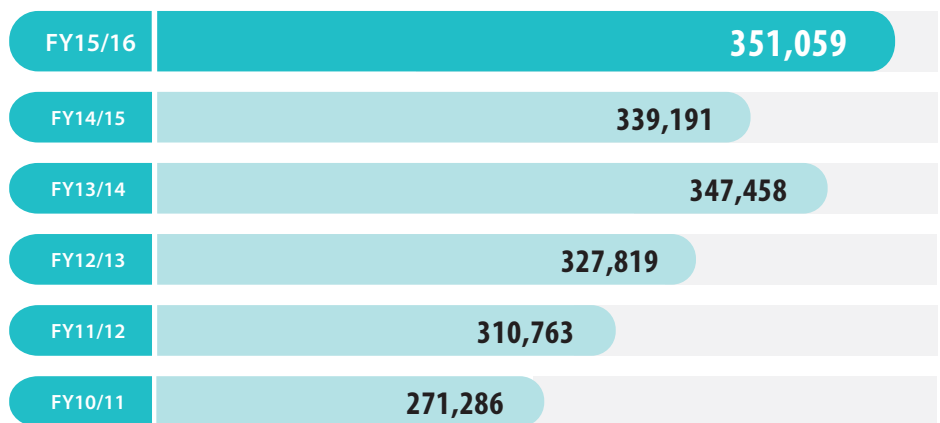
## PASSENGER MOVEMENTS



## AIRFREIGHT MOVEMENTS (TONNES OF AIRFREIGHT)



## COMMERCIAL AIRCRAFT MOVEMENTS



# @CHANGIAIRPORT ON Instagram



## A LEADING AVIATION HUB



Myanmar National Airlines is one of four new airlines Changi Airport welcomed into its family during the year.

With a family of over 100 airlines connecting Singapore to 330 cities around the world, Changi Airport is one of the world's busiest airports for international traffic. Growing the air hub and expanding its connectivity is a key focus for CAG.

Changi Airport clocked 12 consecutive months of positive growth during FY2015/16, handling a record 56.7 million passengers for the period. This was a 5.1% increase compared to the previous year and placed Changi as the sixth busiest airport in the world in terms of international passenger traffic. For the year, aircraft movements rose 3.5% to reach 351,060 flights.

Passenger traffic to all regions grew, with the exception of Africa. Northeast Asia and Southeast Asia registered the strongest traffic growth of 7.1% and 5.3% respectively.

Indonesia continued to rank as Changi Airport's largest country market, followed by Malaysia, Thailand, Australia and China. In particular, China (+11%) and Thailand

(+11%) showed strong growth over the course of the year. In terms of the top cities, Bangkok overtook Jakarta to claim the top spot, registering the strongest growth (+13%). Jakarta and Kuala Lumpur were second and third respectively.

During the year, Changi Airport welcomed four new passenger airlines – Batik Air, China West Air, Myanmar National Airlines, and Thai Lion Air. Seven new city links were also established – Cairns (Australia), Changchun, Quanzhou, Sanya and Yinchuan (China), Lucknow (India) and Utapao or Pattaya (Thailand).

### Embracing new opportunities

Together with its airline partners, CAG took strategic steps to enhance Changi Airport's connectivity and

strengthen Singapore's position as the leading air hub for the region.

CAG continued to work closely with its key home carriers under the Singapore Airlines (SIA) Group to grow passenger traffic through Changi. One major collaboration with SIA, which has been running for more than four years, is the popular Changi Transit Programme, which rewards passengers for choosing Changi as their preferred transfer airport.

In April 2015, CAG signed a three-year memorandum of understanding (MOU) with Xiamen Airlines to work together to increase traffic links and grow passenger traffic. The MOU formalised the partnership to increase air services between Singapore and China, as well as to grow traffic between China and destinations in Southeast Asia and Southwest Pacific, via Singapore. A new daily Singapore-Hangzhou-Xi'an service was launched on 29 March 2015, doubling the capacity on the Singapore-Hangzhou route. The airline also injected significant

additional capacity during the peak travel period over the 2016 Chinese New Year season.

In addition, Xiamen Airlines collaborated with CAG to organise travel trade seminars in Xi'an, Zhengzhou and Johor Bahru as well as to roll out joint retail programmes to enhance its passengers' experience at Changi Airport. In view of Xiamen Airlines' close partnership with CAG on many fronts, it was conferred the Partner of the Year accolade at 2016 Changi Airline Awards. This award gives special recognition to a key partner who has collaborated with CAG and made a substantial contribution to the growth and development of Changi Airport.

CAG inked a six-party Memorandum of Strategic Cooperation on 8 January 2016 with Chongqing Airport Group, Air China Limited Chongqing Branch, China West Air, Chongqing Airlines and SilkAir. With Chongqing as the location for the third Singapore-China government-to-government project, this memorandum formalised the agreement for both airports to work closely with airline partners

to grow connectivity to Chongqing and Western China via Chongqing. On the back of this memorandum, China West Air launched its inaugural international service to Singapore from its Chongqing base on 4 February 2016. The introduction of this thrice-weekly service on a 180-seat A320 aircraft almost doubled the seat capacity between Singapore and Chongqing.

Following the winning of the Partner of the Year title at the 2015 Changi Airline Awards, British Airways (BA) continued to work closely and pursue further opportunities with CAG. The year saw significant expansion of BA's operations in Singapore. The British flag carrier upgauged one of their double daily London-Singapore services to an Airbus A380 superjumbo in November 2015.

### Strengthening Changi's attractiveness

CAG remains committed to supporting its airline partners and to this end, a number of airline incentives that were announced earlier in 2016 were extended for another year until March 2017.

These incentives include a 50% landing fee rebate for long-haul flights; a reduction in landing fees of up to 5% for large aircraft of over 360 tonnes; a 50% rebate for parking fees; and a 15% rebate for aerobridge fees. The passenger service charge for transfer and transit passengers was also reduced by two-thirds from 1 July 2015. These measures provide cost relief for airlines, promote long-haul services and encourage airlines to operate larger aircraft so as to use Changi's runway capacity more efficiently.

### Growing new traffic segments

Through a series of partnerships with airlines, travel agents and tourism organisations, CAG grew traffic and promoted travel via Changi to destinations beyond Singapore.

In China, CAG embarked on consortium marketing campaigns with tourism boards and travel agents to promote Singapore packages, as well as packages twinning Singapore and another destination. These efforts saw passenger movements between



CAG kicked off the financial year with the signing of a three-year MOU with Xiamen Airlines to grow traffic to and via Singapore.



## A LEADING AVIATION HUB

Singapore and China grow by 11% in FY2015/16, a strong rebound from the 1% decline observed in the previous year. Similarly, to grow Europe traffic, passengers were offered attractive packages to Singapore as well as on itineraries beyond Singapore to Southeast Asia, Australia and New Zealand.

To capture the fly-cruise segment from the region, CAG, together with the Singapore Tourism Board and cruise companies – Royal Caribbean International and TUI Cruises – collaborated on joint marketing campaigns to promote cruising from Singapore. As part of the collaboration, for the first time, TUI Cruises home-ported its *Mein Schiff 1* cruise ship in Singapore to offer Southeast Asia cruises during the 2015/16 winter season.

Through schemes such as the Singapore MICE Advantage Programme and the Singapore Incentives & Rewards programme, CAG continued to cultivate the Meetings Incentives Conferencing

and Exhibitions (MICE) market and also provided customised experiences for large MICE groups travelling beyond Singapore.

For achieving success in marketing Changi Airport as the preferred air hub, CAG clinched the Routes Asia 2016 Marketing Award (in the over 20 million passengers category) for the fourth consecutive year.

### Promoting to key markets

Changi Airport continued in efforts to directly engage consumers in four strategic source markets (Australia, China, India and Indonesia) with the business objectives of boosting traffic, increasing spend per passenger and building advocacy.

With media consumption trends shifting heavily to digital and mobile channels, websites for each of these key markets were developed to cater to each market's consumer preferences and surfing habits. During periods where consumers typically start planning

their vacations, these websites also carried promotional airfares for travel to and through Singapore that are most relevant to them, serving as a strong call to action.

Additionally, direct marketing efforts, using Changi Airport's and selected travel agents' email databases, have resulted in high engagement and strong customer leads.

Geo-targeted social media content and tailored online search strategies were developed based on the preferred language, online search patterns and popular discussion topics of each market. These helped to provide sustenance and built advocacy throughout the year.

### Boosting Changi's air cargo capabilities

Changi Airport handled 1.87 million tonnes of cargo in FY2015/16, an increase of 1.1% year-on-year. Perishables, pharmaceuticals and express/e-commerce were segments that performed well, contributing to a significant portion of Changi's total cargo throughput. Pharmaceuticals in particular grew an outstanding 49% compared to the year before, continuing its strong growth from previous years.

To strengthen its pharmaceutical handling capabilities, CAG was the first airport in Asia to launch a community of cargo partners whom it will support to pursue the attainment of the International Air Transport Association's (IATA) Center of Excellence for Independent Validators on Pharmaceutical Handling (CEIV Pharma) certification. This is a standardised global certification programme that trains and conducts onsite assessments for participating companies to raise the standards of pharmaceutical handling. Supporting the attainment of this certification are CAAS and the Workforce Development Agency, who partnered CAG to co-fund



TUI Cruises home-ported its *Mein Schiff 1* cruise ship in Singapore for the first time to expand its presence in Southeast Asia.

**CHOOSE YOUR OWN CHANGI ADVENTURE!**

**Adventure #1: Enchanted Garden**

From Australia  
**Scoot thru Singapore**  
 to the rest of Asia  
 Roundtrip

from **\$200** off

Promo code: **CHANGI**

Sale period: Perth: 0000hrs 25 June 2015 - 2359hrs 27 July 2015,  
 Gold Coast, Syd, Melb: 0200hrs 25 June 2015 - 0159hrs 27 July 2015.  
 Blackout periods apply. Terms & conditions apply

**CHANGI**  
 airport singapore

Airfare promotional campaigns is one of the ways Changi Airport reaches out to potential travellers in its key source markets.

the costs for the cargo companies through the provision of assistance grants.

Under the community approach, at least one company from each node of the supply chain will undergo the certification. Companies with this certification will have to adhere to stringent requirements, such as maintaining a suitable cargo-hold temperature range and ensuring appropriate handling from tarmac to loading and unloading, as assessed by independent, IATA-certified auditors. The pioneer group of companies in the Changi CEIV Community includes SIA Cargo, dnata Singapore, and freight forwarders Global Airfreight International, Expeditors Singapore, CEVA Logistics Singapore and Schenker Singapore. SATS had already attained its CEIV certification in 2014. The official certification process is expected to be completed by the end of 2017 and will further enhance Changi

Airport's standing as a trusted hub for the transportation and handling of pharmaceutical products. CAG will progressively work with more cargo partners to attain this certification.

As the airfreight industry environment continues to remain weak due to global economic uncertainty and slowing world trade, CAG has continued to support its cargo partners through its cargo incentive schemes. CAG extended the 30% landing fee rebate for scheduled freighter operations for another year to March 2017. The rebate extension together with a one-time special assistance package and other support measures for the cargo sector amounted to S\$14 million in total.

Besides extending support, CAG also collaborated with its partners – Alliance 21, dnata Singapore, SATS and Singapore Airlines Cargo – to exhibit at the 2015 Air Cargo Europe &

Transport Logistics in Munich. The world's largest trade fair for logistics, mobility, IT and supply chain management, this was a valuable platform for CAG and its partners to promote Singapore as a reliable and trusted air cargo hub.

During the year, Changi Airport welcomed four new freighter carriers – Polar Air Cargo, My Indo Airlines, Neptune Air and AirBridgeCargo Airlines. With active marketing efforts, the year also saw the introduction of new freighter links to Cincinnati (United States), Moscow (Russia) and Zhengzhou (China), offering a total of 12 additional weekly services.

CAG was named the Asia Pacific Airport of the Year 2015 (Customers' Choice) by Payload Asia, and Best Green Airport 2015 by Asian Freight, Logistics & Supply Chain Awards. These achievements serve as a testament to Changi Airport's standing as a key airfreight hub in the region.

# A FIRST-CLASS CHANGI EXPERIENCE



The launch of the Star Wars at Changi celebrations drew huge crowds to Changi Airport on 12 November 2015.

The award-winning Changi Experience is one underpinned by a desire to go beyond what is expected from an airport, to deliver positively surprising moments cherished by our passengers. From ensuring smooth and efficient operations, to providing a personalised touch in our service, we seek to wow our passengers so that their time with us is a memorable one.

## A year of celebrations

As an affirmation of our efforts, Changi Airport received 29 Best Airport awards during the year. These included the Skytrax World's Best Airport for the fourth consecutive year, and Business Traveller's Best Airport in the World for the 28<sup>th</sup> year running.

Changi remains the world's most awarded airport, receiving its 500<sup>th</sup> Best Airport award in November 2015. To mark the major milestone and as an appreciation to passengers

and the airport community for their unwavering support over the years, leaders from CAG and various airport agencies came together on 24 and 25 November 2015 to serve complimentary fresh coffee brews in the three terminals. The celebration was well received and some 10,000 cups of coffee were served to passengers and staff over the two days.

The year-end holiday season is a special time for many around the world. In November 2015, Changi Airport ushered in the festivities

with a stellar Star Wars-themed extravaganza that saw life-sized Starfighters and characters from the movie series making their appearance in the airport. The celebration, which was timed with the launch of the new *Star Wars: The Force Awakens* movie, proved to be a huge hit with passengers and fans alike.

A life-sized X-wing fighter plane took centre stage in the T3 Departure Hall. Visitors were invited to don Star Wars costumes and climb into the fighter plane's cockpit for photos which they could take home as a souvenir. They could also learn how to recite famous Star Wars movie lines in different languages at the interactive booths. Over at T2, another signature Starfighter – the TIE fighter – was on display in the Departure Hall, providing

another hugely popular photo spot for visitors to capture their memories.

Adding to the revelry, a troop of 30 Stormtroopers and Starfighter pilots staged a stunning battle display for a crowd in the thousands at T3 during the launch event on 12 November 2015. Star Wars fans and passengers gathered to witness the spectacle as the Star Wars characters paraded down the escalators from T3, across the mezzanine link bridge and over to T2.

Other fun-filled activities and performances were put together specially to delight even the youngest of visitors. Inspired by the Hardangerjøkulen Glacier, one of the filming locations of *Star Wars: The Force Awakens*, the Norway-themed playhouse featured a four-metre high slide, an illuminating ball pit, a

ski slope and even a rock climbing lighthouse station for juniors to conquer. Weekly character meet-and-greet sessions were organised for eager fans and children who had the time of their lives turning up in costumes and posing for photos amid the Star Wars fever that had gripped fans across the globe.

The celebrations provided passengers and visitors a unique experience that one would hardly expect when travelling through an airport. It not only positioned Changi Airport as a destination on its own, but also augmented Changi's status as a stopover of choice in the minds of travellers around the world.

To deepen the relationship with our passengers, Changi Airport unveiled a series of WOW initiatives in January 2016, providing another

layer of positively surprising experiences for those travelling through Changi. With activities such as photo taking with the airport's mascot Max, screening of live football matches, storytelling for kids, and origami folding sessions, this was an initiative to provide something for everyone to look forward to during their time at Changi.

One of the more popular programmes executed was the giving out of complimentary local *kacang puteh* snacks from kampong-inspired mobile kiosks in the transit areas. This activity married the simple gesture of offering free snacks to travellers with an educational component of introducing Singapore's unique heritage to them. Over 30,000 passengers received



Mr Tan Lye Teck, CAG's EVP for Airport Management (middle), serves up a cuppa to a housekeeping staff to share the joy of Changi Airport receiving its 500<sup>th</sup> Best Airport award.

## A FIRST-CLASS CHANGI EXPERIENCE



Mobile kiosks offering travellers complimentary local snacks was one of the many WOW initiatives rolled out in the year.

the complimentary snacks, providing meaningful moments of engagement and shareable memories.

### Driving efficiency & productivity

Running an award-winning international airport that serves more than 56 million passengers a year is a complex and often labour-intensive task. As part of CAG's ongoing effort to drive greater efficiency and productivity in airport operations, several key initiatives were rolled out over the year. These proved effective in keeping pace with Changi Airport's growing passenger traffic, as well as supporting manpower-intensive operations amid Singapore's tight labour market. By leveraging

new and emerging technologies that would augment operations, CAG was able to achieve productivity gains on several fronts, allowing more to be accomplished with the same level of manpower deployment.

### Fast and Seamless Travel (FAST)

One such example is the FAST programme, a suite of self-service initiatives covering four key passenger touch points – check-in, bag drop, immigration and boarding. By simplifying and automating the processes at these touch points, CAG seeks to reduce the dependence on manpower to manually process passengers, freeing up staff to either support operations in other areas or to focus on providing more personalised forms of service.

The FAST offerings such as self check-in and self bag drop also afford greater flexibility to passengers. At the same time, ample help is available from ground staff deployed nearby to assist those who might need help or assurance. Besides enabling passengers to enjoy a faster and more flexible airport experience, automation raises efficiency and productivity of operations, lowering cost for airlines in the longer run.

The FAST programme at Changi Airport has been implemented in phases, with Singapore Airlines, SilkAir, Cathay Pacific, AirAsia and Qantas among the airlines coming on board the FAST programme during the past year alone. As an example, CAG partnered Singapore Airlines and its regional wing, SilkAir, to roll

out 24 FAST check-in kiosks in T2 and another 24 kiosks in T3. Over the past few years, 16 airlines have adopted at least one of the FAST initiatives to date. Collectively, these airlines account for about 70% of passengers departing from Changi Airport and CAG will continue to work closely with airlines to grow the adoption of FAST.

The results of our FAST implementation have been encouraging. As of March 2016, about 40% of departing passengers were choosing to travel using at least one of the FAST options. Feedback gathered from customer surveys also paint an encouraging picture, with more than 90% of passengers expressing their satisfaction with the FAST experience.

### Common early check-in

Another productivity initiative that was rolled out over the past year

was the common early check-in counters which serve as a one-stop check-in location for passengers of various airlines who wish to check-in early for their flights. The common early check-in facilities help to improve efficiency by smoothening the flow of passengers beyond the peak periods of the day. By reducing the peak load, the queues can be shortened for passengers, while also reducing the stress on the check-in teams.

Prior to the common early check-in initiative, airlines offered early check-in services independently and this proved to be both cost- and labour-inefficient. By pooling together space and manpower resources under the common early check-in initiative, airlines can now offer all-day early check-in for passengers while achieving cost and manpower savings. The initiative is projected to help airlines and ground handling agents

achieve cost savings over the long term given the reduction in staff headcount required during peak hours. With the consolidation of early check-in operations, the initiative has also brought about capacity gains for the terminals by freeing up counter space.

The common early check-in facilities currently serve 23 airlines. Another 25 airlines offer early check-in at their own check-in counters. At present, early check-in of at least four hours before flight departure is available to more than 80% of departing passengers. CAG will continue to work with airlines and ground handlers to offer this service to more passengers. Through the early check-in facilities, CAG also hopes to encourage passengers to arrive at the airport earlier to enjoy its award-winning facilities and to allow for a more relaxing departure experience without the need to rush.



CAG partners airlines to roll out FAST check-in kiosks to enhance passenger convenience.

## A FIRST-CLASS CHANGI EXPERIENCE



The new early check-in lounge was opened in T1 to give passengers a more comfortable check-in experience.

### Automated Trolley Management System (ATMS)

CAG is no stranger to pioneering innovation in the airport environment. As an extension of the airport-wide productivity drive, the ATMS was officially implemented in late-2015 to support transit trolley operations across Changi Airport's 1,000,000 square metres of floor area. The ATMS is a technology-driven system designed to empower trolley service staff with real-time information on where trolleys are needed most, so that they can better plug supply and demand gaps in the most efficient manner.

Utilising video-analytics, the ATMS calculates the number of trolleys at each of the 70 docking bays at the arrival gates. As the ATMS is connected to the airport's flight information system, it can anticipate potential demand based on the aircraft size of incoming flights and

cross-check this with the existing supply of trolleys at each trolley docking point. If the system detects that there are insufficient trolleys, it alerts the trolley service staff to top up the number before the flight arrives. Staff can now target their efforts on where there is upcoming demand and improve overall service delivery.

Since the implementation of the ATMS, man-hour savings of up to 25% have been achieved. As only a core team is now needed within the transit areas, some staff can be freed up to be more effectively deployed to other areas of the airport such as the landside areas. With the ATMS, CAG has also been able to increase the number of trolley bays in the transit areas from 50 to 70, providing more service points for passengers.

### Fostering a ONE Changi culture

As CAG continues to roll out enhancements to improve the

efficiency of Changi Airport's operations, it continues to focus on the fundamentals of a strong service-oriented mindset that sets the airport apart. Some 40,000 staff from more than 200 agencies work together at Changi Airport to deliver a consistent Changi Experience to passengers. Regardless of the class of travel, CAG believes in offering passengers the same personalised, stress-free and positively surprising experience; this is the Changi Service philosophy.

As part of its ongoing journey of service excellence, CAG embarked on a ONE Changi culture-building initiative in October 2015. Led by 130 stakeholders that spanned senior management members to frontline staff from CAG and its partner agencies, the initiative aims to foster a shared vision and commitment towards delivering the best for passengers. Engagement initiatives rolled out included

airport-wide service-driven campaigns and the launch of a ONE Changi TV platform in staff rest areas to keep the community updated on the airport's latest news, events and happenings. The ONE Changi TV also serves as a useful platform to share service tips and best practices with airport staff.

As Changi Airport has to run like clockwork with many pieces serving many missions, it remains deeply rooted in its commitment to service excellence through close collaboration with partners to achieve a steadfast ONE Changi culture.

### Seletar Airport

Located in the north of the country, Seletar Airport contributes to Singapore's position as a vibrant aviation hub, serving as a gateway for business aviation, and an enabler for the Seletar Aerospace Park.

Over the course of the past year, several functional and aesthetic improvement works were carried out within Seletar's passenger terminal building. Some examples include the refurbishment of the terminal's seating, improvements to signs and also the putting up of festive landscaping throughout the year to provide a warm welcome to passengers. Taking into account feedback received from the public, the team also worked with the Land Transport Authority to improve the wayfinding signage to Seletar Airport on public roads and expressways.

The construction of a new passenger terminal building at Seletar is expected to begin in the last quarter of 2016. When completed, it will enable Seletar Airport to better cater to the specific needs of the airport's different users, and support scheduled commercial flight operations in future.



The ONE Changi initiative brings airport stakeholders together to realise a shared vision in delivering the best to Changi Airport's passengers.



The half-tonne food waste digester handles about 300 kilograms of food waste every day.

### Food waste recycling

The need to minimise waste in land scarce Singapore has prompted Changi Airport to intensify its recycling efforts by exploring new areas which innovation in technology has now afforded. As part of a first-of-its-kind trial at Changi, food waste is now being recycled daily at one of its more popular dining venues, Kopitiam, as well as NTUC Fairprice supermarket, where it is used for perishable products that have passed their expiry dates.

The 'food waste digester', as it is coined, was rolled out in July 2015 as part of a pilot programme. The machine uses microbes to break down food waste into

water. This means that less food waste is left at the end of the day and consequently, this also reduces the resources required to transport the waste out of the airport.

Today, about 300 kilograms of waste from T3's Kopitiam is fed into the food digester daily. This represents about half of the total food waste generated by the food court every day. The innovative waste recycling solution has been well received and has shown promising results in trimming down waste generated. CAG is looking at rolling out it out to other F&B operators in Changi Airport.



# STEPPING UP THE IT GAME



The enhanced ChangiAirport.com now boasts a sleeker design and new browsing features.

Growing passenger traffic and a tight labour market have brought about increased challenges in ensuring the highest standards of service at Changi Airport. To keep up with rising demands, CAG's information technology teams work closely with other divisions to come up with cost-effective and customer-centric enhancements to help Changi enhance its service and retain its competitiveness.

## Enhanced platforms for operations

CAG leverages various information technologies to anticipate and solve complex problems to better serve customers and the airport community. An example of a data-driven solution is the Airport Collaborative Decision Making (A-CDM) platform that brings together key airport stakeholders to share useful real-time operational data – such as air traffic control radar data and airline and ground handler data from operational systems – equipping them with better situational awareness for immediate decision-making. Through improved operational planning and resource allocation, A-CDM allows timely responses to fast-paced changes at the airport. This results in safer and smoother

operations as well as an enhanced passenger experience. Rolled out in phases over the past year, the system will be fully implemented by the end of 2016, enabling partners to work more seamlessly and transparently.

Two business intelligence (BI) projects aimed at boosting the airport's efficiency and productivity were launched during the year. The first customer insight-led BI initiative involved a transformation of the airport community's data collection and analysis processes. By integrating diverse data from six ground surveys into a common platform, the new model reduced processing time by over 65%, enhancing the availability and quality of service performance-related insights. The faster and deeper cross analysis across various

touchpoints also allows operations as well as management staff to better understand and improve the ground situation, which in turn helps uphold the high service quality standards at Changi Airport.

The second BI project that was successfully rolled out is a system named Flight Information Reporting and Transfer. It grants users access to extensive real-time air traffic and passenger statistics on-the-go. Built on an analytics platform, the new executive dashboard and reporting tool enable users in CAG to visualise and analyse traffic data in a more dynamic manner. These IT enhancements allow for timely interventions and better-informed decision-making, which help to strengthen CAG's operational and incident management capabilities.

To create a more conducive work environment, several new technologies and services were also introduced in CAG's workplace last year. These included enhanced webmail, a resource booking system and 'Quickdrop' for easy and secure file-sharing.

## A facelift for ChangiAirport.com

Sporting a refreshed design and new browsing features, online users can now find useful information easily on Changi Airport's revamped website – ChangiAirport.com. On top of a more user-friendly experience, the new portal features geographical targeting and mobile responsive capabilities so users are served relevant information in the most ideal format. Other features include new airport maps, inspiring travel ideas, as well as attractive promotions and recommendations. Since the revamp in July 2015, CAG has seen a 50% jump in website traffic, and close to a 70% increase in the average dwell time on each page.

# ENGINEERING FOR GROWTH



The T4 development project is one of the many projects CAG's Engineering and Development Group manages in entirety from planning and construction to completion.

With Changi Airport operating 24/7 everyday, the support of a strong technical team to plan, develop and ensure the safe and smooth functioning of all airport engineering infrastructure and services is critical. CAG's Engineering and Development Group, supported by industry partners, takes on these challenges.

## Airport capacity enhancement

With air traffic rising, Changi Airport has to look ahead to plan new capacities for aircraft, passenger and cargo handling ahead of time. Over the year, designs for more aircraft parking stands, including those that can flexibly park one wide-body aircraft or two narrow-body aircraft within the same space to optimise land use have been rolled out. Eight new aircraft parking stands have since been completed at the West Cargo Apron, while two others at the East Cargo Apron are nearing completion. Another 26 more at the southern end of the airport are also being built.

## New infrastructure development

One of CAG's major projects is the development of T4. The construction of the terminal will be completed by the end of 2016. Fitting out works for building services and finishes are well in progress and the new terminal is undergoing inspection by various authorities. Part of T4's development involves the building of a new Ramp Control Tower to enhance air traffic controllers' line

of sight to aircraft parking stands and manoeuvring areas towards the airport's southern end.

When completed, T4 will be served by 21 aircraft stands with aerobridge connections, including four aircraft stands each capable of parking a superjumbo Airbus A380 aircraft or two narrow-body aircraft within its boundaries. Other infrastructure include two multi-storey car parks providing 1,700 parking spaces, and three vehicular and pedestrian bridges spanning across Airport Boulevard to facilitate the movement of staff and vehicles both on the landside and airfield areas. T4 will also feature staff-friendly work environment and amenities, like spot cooling and brighter lighting for baggage handlers, and a staff resting lounge.

During the year, enhancements were also made to facilities at the existing terminals to enhance capacity, safety and passenger experience. A new taxi queuing deck for T1 was built above the existing one for T3. It provides additional space to hold 300 taxis, relocating the taxi queue away from the Airport Boulevard to T1, enhancing road safety. Built with

the welfare of taxi drivers in mind, it includes a canteen, rest areas, comfortable washrooms and water dispensers.

With the extension of T1 to expand its handling capacity and to merge it with Jewel which is located just in front of it, roads were diverted in phases to support these works. The T1 baggage handling system is also being automated to support self-service check-in and early bag storage with minimal manpower increase.

## Safety focus

As the airport gets busier, the emphasis on safety has to be raised in tandem. Against a backdrop of higher thunderstorm intensity and frequency, CAG has worked with the National University of Singapore Centre for Transportation Research to introduce, for the first time outside the United States, trapezoidal-shaped grooves on one of Changi Airport's two asphaltic pavement runways. The grooves provide better surface water drainage during adverse weather conditions and reduce the risk of hydroplaning, which can cause an aircraft to veer off the runway.

Separately, a new and innovative aircraft earthing pit design and an aerobridge earthing device to significantly improve the safety of those working on the aircraft parking aprons have been developed and are being rolled out airport-wide.

## Sustainability drive

As part of the airport's flood prevention measures, a new detention pond capable of storing rain water about 210 Olympic-sized swimming pools has been completed. This rain water collection tank is designed to collect surface discharge from the south-western quadrant of Changi Airport during a big thunderstorm before the water is pumped into external drains leading to the sea.

## ENSURING SAFETY & SECURITY



AES officers evacuating a 'casualty' as part of a routine training exercise.

The safety, security and well being of passengers and the airport community is CAG's top priority. Amidst an increasingly complex operating landscape, the Airport Emergency Service (AES), Aerodrome Safety Unit (ASU) and Aviation Security Unit work round-the-clock to keep both Changi and Seletar Airports safe and secure.

During the year, CAG continued to enhance the emergency preparedness and readiness at Changi and Seletar Airports with two successful exercises. In July 2015, a third exercise saw AES supporting the Singapore Civil Defence Force (SCDF) on SCDF's response methodology for chemical, biological and radiological incidents at Changi.

To allow stakeholders to more conveniently access the Changi Airport Emergency Plan on-the-go, a new online portal was launched in October 2015.

Over at Seletar, a new fire training ground with an aircraft simulator named the 'Supermarine Southampton' was commissioned on 9 April 2015. Featuring seven burn sectors, an engine fire simulator and a control room that is unique to Southeast Asia, the fire training ground is crucial to AES' fire training exercises.

The ASU plays an important role as CAG's safety office to oversee the effective implementation and maintenance of CAG's Safety Management System and to ensure

CAG's continued compliance with regulatory safety requirements.

During the year, Changi Airport received again a deficiency-free rating from the International Federation of Air Line Pilots' Associations (IFALPA). This is a rating Changi has maintained for 34 consecutive years since the airport opened in 1981.

To inculcate a strong safety hazard reporting culture among the airport community, a new mobile feedback platform named 'iFeedback' was implemented in August 2015. The tool empowers CAG staff and selected airside partners to submit real-time hazard reports expediently, which in turn allows safety issues to be addressed more promptly.

In March 2016, ASU re-launched the CAG Safety Seminar, with the theme 'A Safe Airport for Everyone' for its airport partners. With panel discussions involving an international line-up of renowned international safety experts, the airport community came together to update itself and discuss further ways towards ensuring a safe airport environment for the travelling public.

To promote safety at Seletar Airport, an inaugural Seletar Safety Action Group meeting was held in September 2015 where the Safe Recognition Programme was launched to encourage safe work practices and proactive safety reporting. Safety champions from each ground service provider were appointed to spearhead safety initiatives in their organisations.

To maintain high standards of security management at the airport, CAG's Aviation Security Unit works closely with the Airport Police Division as well as CAAS and other government agencies to enhance airport security procedures. Over and above day-to-day operations within the three terminals, planning for security processes and infrastructure at the new developments are in progress.

With T4 coming up, CAG embarked on a series of trials on new security screening technologies. One of the trials currently underway is a new computed tomography (CT) security screening equipment that screens hand-carry luggage at the boarding gates. Using advanced 3D screening technology, the new equipment allows passengers to keep electronic devices in their hand-carry luggage during the screening process, increasing convenience for passengers. In conjunction with the CT trial, a new tray return system, which will improve screening efficiency and reduce waiting times for passengers, was also tested.

A second trial involves the use of a body scanner to screen departing passengers. Using millimetre wave technology to detect both metallic and non-metallic items, the new machine allows aviation security officers to carry out a less intrusive screening process. Both initiatives are in line with the approach to be taken at T4 to optimise operational efficiency, while enhancing security and the passenger experience.

## THE BEST IN SHOPPING & DINING



With refreshed F&B offerings within the public areas of the airport, visitors now have even more choices when they dine at Changi.

CAG's profit from Changi Airport's non-aeronautical business helps to keep airport fees low, ensuring that Changi stays competitive as an air hub. During the year, Changi Airport continued to work with its partners on a retail strategy that caters to the needs and demands of passengers, creating an enjoyable experience for shoppers and diners.

Growth of 5.1% in traffic at Changi Airport, along with the introduction of innovative retail concepts such as duplex stores, a varied tenant mix and promotional campaigns, contributed to another record year of retail sales at Changi. Concession sales for the year rose 9.9% year-on-year to more than S\$2.2 billion, placing Changi Airport among the top three airports in the world for retail sales.

### New services and refreshed offerings

With 360 retail and services outlets and 140 dining outlets over 76,000 square metres of retail space, passengers at Changi Airport are spoiled for choice. During the year, one of Changi's core concessions –

Cosmetics and Perfumes – welcomed the opening of its beauty duplex at T3. Named The Shilla Beauty Loft, passengers can pamper themselves with facial spas, makeovers and beauty consultations from renowned brands such as Chanel, Dior, La Prairie and SK-II.

To ensure Changi Airport stays at the forefront of passengers' ever-changing needs and preferences, CAG continued to introduce new brands and retail concepts to shoppers. The year saw more than 10 new-to-Changi brands added in the transit malls, including Spanish label Zara with its first duplex store in an airport, Saint Laurent Paris, Samsung Experience, and Garrett Popcorn. The opening of

The Fashion Gallery at T1 also presented shoppers with new fashion brands such as Kenzo, Etro, as well as popular shoe brand Melissa – all in one store.

Food connoisseurs hunting for delectable food before their flight have also been delighted with new F&B options, including a new thematic food court, Straits Food Village. Featuring local delicacies and an assortment of street food-style cafes, it also introduced self-service ordering kiosks for the convenience of passengers. Other new brands introduced during the year included Owl Transit, Pizzeria PEZZO and Sushi Burrito.

To attract more airport visitors and keep them coming back, the public areas of Changi Airport saw more than 10 new brands and a refreshed retail mix. Brands which marked their first footprint at Changi included fashion labels Yishion and Redeye, as well as F&B outlets such as Artisan Boulangerie Co., Old Town White Coffee and Tsubohachi Izakaya Hokkaido.

## THE BEST IN SHOPPING & DINING



Changi Airport's Shopping Concierge service provides a personalised shopping experience for shoppers.

### A 'WOW' shopping experience

Shopping is very much part of the travelling experience and at Changi Airport, much emphasis is placed on providing shoppers with personalised service, a stress-free environment and positively surprising moments.

Changi Airport continued to develop its Shopping Concierge initiative during the year. Concierge desks were introduced at T1 and T3's information counters, giving the personalised shopping service a stronger presence. The concierge service enhanced shoppers' experience by advising them on the best shopping deals, gifting ideas and Changi travel exclusives. Passengers can pick up the 'Why Shop @ Changi' pamphlets to know more about shopping at Changi, including the complimentary services of the Concierge and shopping privileges. The service has been very well-received, with more than 1,600 compliments from satisfied passengers during the year.

In addition to the Shopping Concierge service, Changi Airport also

supported its tenants in marketing their global product launches. These products, which were first launched at Changi and were exclusive to passengers for a period of time, spanned different key product categories and included SK-II RNA Power, Miu Miu's first fragrance and Balvenie 21 Year Old Madeira Cask.

Changi also supported tenants who conceptualised themed-concept outposts such as the Kit Kat Beach Break Bar and the launch of the Dior Sauvage Male Fragrance. Besides enabling brands to leverage Changi Airport as their choice showcase platform and to drive in-store sales, such activations also delighted passengers through interactive, fun and experiential engagements.

### Expanded online footprint

Changi's online shopping portal, iShopChangi, continues to gain traction with customers. Sales and transaction volumes in FY2015/16 more than doubled from the previous year. Offering over 6,000 items from various product categories such as beauty, electronics, fashion, food, home, timepieces and wines & spirits,

iShopChangi offers a 24/7 one-stop shopping platform for passengers travelling from Changi. The addition of new brands such as Bobbi Brown, Urban Decay, Makeup Forever, Clarisonic, Hello Kitty, Guardian, Samsung, Risis and Montblanc further enriched the online offerings.

Shoppers can buy online between two weeks and 18 hours from their departure flight times and pick up at the collection centres located in the transit lounges of all three terminals. Since November 2015, an arrival collection service has been extended to shoppers who purchase wines and spirits, and perfumes and cosmetics. They can enjoy the convenience of tax-free shopping online and pick up the items only when they return to Singapore.

### A vibrant retail destination

A shopping destination of choice requires a strong and varied retail mix, with value-for-money pricing; it also needs to be vibrant to keep shoppers excited. To this end, Changi Airport constantly injects freshness into its annual 'Be a Changi Millionaire' and festive season shopping promotions.

The 'Be a Changi Millionaire' campaign returned for its sixth run in 2015, but with a local twist, giving visitors and shoppers from all over the world the opportunity to join in the nation-wide SG50 celebrations. The instant prizes were specially designed by local designers, and a seventh finalist was also picked from among iShopChangi shoppers. The promotion registered a 16% increase in participating entries numbering nearly two million from 229 nationalities, a record number for the promotion. The Grand Draw event in January 2016 saw Irish shopper Linda Tobin crowned Changi's sixth millionaire amidst much excitement, with on-site audience participating in the live event (see page 6).

The other retail highlight – Changi's annual year-end shopping promotion – took the airport by storm. The theme for the 2015 festivities was the iconic Star Wars, delighting many fans locally and from around the world. As part of the promotion, shoppers could purchase an exclusive Star Wars plush toy with a minimum spend.



Airport visitors had the opportunity to purchase and collect nanoblocks of famous world landmarks.

At the close of the promotion, over 332,000 plush toys had been redeemed, achieving a participation rate of 35%.

In addition to the two anchor promotions, a special SG50 shopping campaign was launched for transit passengers from end-May to August 2015. It was a refreshing and rewarding shopping experience

for shoppers, who were able to enjoy more than 150 deals from over 140 participating retail outlets offering SG50 collectibles, gifts-with-purchase, purchases-with-purchase and discounts of up to 50%. Airport visitors who were not travelling were also able to enjoy monthly deals from July to September such as 50% discount off home-grown brands, savings from the 'Save 2xGST on Shopping' campaign and the Eat.Scratch.Win dining promotion.



The Balvenie Morgan, a handcrafted V6 Roadster was specially flown in for the global launch of The Balvenie's 21 Year Old Madeira Cask at Changi Airport.

To grow its retail revenue and accentuate Changi Airport as a vibrant shopping and dining destination not just for travellers, but also local residents, Changi also ran tactical promotions to excite airport visitors and encourage repeat visits. The 10-week long 'Take the World with You' promotion featured a purchase-with-purchase mechanism and the chance to win Changi Dollar Vouchers in a gamification segment. Held from mid-January to March 2016, the promotion offered shoppers the opportunity to purchase and collect six Nanoblock designs featuring famous world landmarks – the Kaminarimon, Eiffel Tower, Tower Bridge, Great Pyramid of Giza, Leaning Tower of Pisa and Taj Mahal – with a minimum spend. The promotion was very well-received, with full redemption of the more than 38,000 premiums.

## THE BEST IN SHOPPING & DINING



With fun activities and events planned during the school holidays, Changi Airport is a must-visit destination for families.

During the school holidays, family-oriented activities and showcases featuring destinations Changi Airport is connected to were put up in T3. Destinations like India, China and the United States were featured, and visitors to the events were introduced to the countries' cultures and activities such as India's Holi festival, traditional Chinese mooncake-making and San Francisco's Pier 39-inspired carousel rides. Besides the sharing of the offerings of each destination and inspiring interest to travel, these events reinforced Changi Airport as a family-friendly destination and helped to increase footfall and spending in the public areas.

Outpost events to feature brands and their range of products were organised all year round in T3 to maximise the potential of the space available. Retail brands such as The Planet Traveller and Sophisca which featured their travel products and candies respectively saw good response, with their sales doubling during the event period. During the Chinese New Year, a bazaar retailing New Year goodies and decorations added to the festive mood at the airport.

To reward Changi's loyal fans, the Changi Rewards loyalty programme gives members 7% GST savings when they shop or dine in the

public areas. The membership base grew 50% over the year to more than 300,000 members.

### Rentable properties

CAG manages the leases and operations of over 1,500 rentable premises within Changi Airport, both in the passenger terminal buildings and the Changi Airfreight Centre (CAC). The rentable premises include offices, airport lounges, warehouses and stores. In addition, CAG manages more than 60 long-term land leases rented to private developers such as ground handlers, cargo and logistics companies, and commercial entities.

With coming developments such as T4 and Jewel, it is crucial to ensure that the needs of CAG and its aviation partners for space are adequately met. This will help facilitate the growth and expansion of key partners in Changi Airport, and further support Changi's position as a major air hub.

During the year, a plot of land adjacent to the dnata Cargo Centre in CAC was identified as the site of dnata's new maintenance base. The existing base was built more than 30 years ago and would benefit from a modernisation of the facilities within. When completed in the first quarter of 2017, the new maintenance base will house new equipment and technology that will triple the handling capacity compared to the existing base. It will service dnata's current fleet of more than 320 motorised and 1,200 non-motorised ground service equipment. The plot of land that the existing base sits on will be redeveloped by CAG to provide for additional aircraft parking stands.

To allow space for the expansion of T1 and Jewel, as well as the installation of a new baggage handling system within T1's current premises, CAG worked closely with its airport partners to identify



The new British Airways lounge in T1 boasts its famed Concorde Bar which serves up a premium selection of food and drinks for passengers.

replacement and relocation space to meet the infrastructure needs of the airport whilst minimising disruption to its partners' operations.

Within the terminals, airline lounges are one of the significant touchpoints for passengers. Therefore, rejuvenation of the lounges in Changi Airport is important to keep up with the needs of passengers and to shape positive travel experiences. CAG supported British Airways and dnata in the renovation of their new lounges to enhance the experience of their passengers.

The British Airways Lounge in T1 was officially opened in September 2015, featuring a modern British design and serving up to 185 passengers at any one time. It was also the first lounge to offer the airline's new Concorde Bar. The lounge features digital panoramic views of the Singapore skyline reflecting the time of day outside.

Opened in November 2015, the dnata lounge in T1 has a design theme that references Singapore's history and culture. It can serve more than 200 passengers at any one time, with facilities including a dedicated dining area, shower facilities, a branded coffee and cocktail bar and a dedicated AV lounge.

During the year, CAG continued to actively engage its tenants in the CAC to enhance rapport. Over festive periods, bright decorations were put up in the common areas to add a festive feel to the cargo premises. Road shows and bazaars were also organised to bring some festive cheer to the cargo community. These initiatives helped in building positive work relations between CAG and its tenants and enhanced the work environment in the CAC.



Passengers get to enjoy a free express makeover at the Dior boutique at the Shilla Beauty Loft at T3 before their flight.

### Dior Delights

Passengers are spoilt for choice when shopping for beauty products at Changi Airport. On top of the wide variety available at The Shilla Duty Free, beauty giant Dior has gone a step further in delighting customers. Its boutique at the Shilla Beauty Loft located at T3 features specially designed consoles where customers can engage with Dior's beauty consultants for a deeper insight into the products and test out colour palettes. Express makeovers are also available so passengers can look stunning whether they are jetting off to an exotic destination or arriving for that important appointment.

And that is not all. One of Dior's beauty consultants is multilingual Ken Alcindor from France (see

page 7). Passengers whom Ken has served have been pleasantly surprised that he can converse fluently in French, Spanish and even Mandarin. His excellent command of the different languages has allowed him to interact more meaningfully with customers.

Dior's distinct and customer-oriented approach reinforces how Changi Airport prioritises the needs of passengers through both personable and personalised services. It is also an example of how CAG and its partners strive to create unique and memorable experiences for passengers, making Changi an airport of choice for its many travellers from around the world.



## UPCOMING DEVELOPMENTS



Incorporating the green signature of Changi Airport's terminals, T4 welcomes visitors with a driveway filled with climbers and flowering plants.

As Asia – especially the major economies of China, India and Indonesia – continues to develop, demand for air travel will grow and airports in the region must be prepared for this. Hence, Changi Airport has been undertaking several large-scale infrastructure projects so that it will be ready to meet this future demand.

Three ongoing developments – T4, Jewel (including the expansion of T1) and Changi East – will increase Changi Airport's capacity to 135 million passengers per annum by the end of the next decade, while enhancing Singapore's appeal as a stopover point for passengers.

Plans are in place to expand Changi Airport with the opening of T4 in 2017, and Jewel and the T1 extension in 2019. Works have commenced for the development of Changi East, which includes a new T5, a three-runway system and aviation industry facilities.

### PREPARATIONS FOR T4 OPENING

Since its groundbreaking in November 2013, the development of Changi Airport's new T4 has made good progress, with construction to

be completed by the end of 2016. It is on track to be operational in the second half of 2017. The main contractor, Takenaka Corporation, has achieved a clean construction record of 11.5 million accident-free man-hours.

The construction of T4 is a complex process and extends beyond the construction of a terminal building. For the public, a new two-lane vehicular bridge across Airport Boulevard will link motorists directly from the Pan Island Expressway to the terminal. A new road also connects the East Coast Parkway directly to T4. These new roads improve public accessibility to T4. A new pedestrian overhead bridge connects two public bus stops along Airport Boulevard to T4, as well as the in-flight catering centre and the Airport Police station.

On the airside, for movement of airside vehicles between T4 and new

aircraft remote parking bays on the other side of Airport Boulevard, there is a new airside vehicular bridge. T4 will also get a 68-metre high ramp control tower to enhance air traffic controllers' visual line of sight of aircraft parking bays and surrounding taxiways near the southern end of Runway 2. These works will be completed by the end of 2016.

The next phase of T4's development will be focussed on getting the terminal's interiors done up and preparing it for operations. It will include the installation and testing of key airport systems such as check-in and bag drop kiosks and the baggage handling system, as well as preparation of commercial spaces.

The biggest game changer at T4 resides in the extensive use of technology to improve passengers' experience, enhance operational efficiency and raise manpower productivity. T4 will see the terminal-wide implementation of FAST initiatives such as a complete suite of self-service and automated options from check-in and bag-drop to immigration clearance and boarding. For the first time at Changi Airport, facial recognition technology will

be introduced at T4 to supplement FAST, eliminating manual verification by staff and enabling the full automation of processing and checks from departure check-in to boarding.

To spearhead the airport community's preparedness for a smooth opening of T4 and to provide strategic guidance for cross-agency efforts for T4's Operational Readiness & Airport Transfer (ORAT), CAG has convened a T4 ORAT Coordinating Committee (OCC). This comprises senior management representatives of the key stakeholders including government agencies, airlines operating at T4 and ground service providers. ORAT will be a period of intensive system testing and trials with volunteers, including live trial flights in the final preparatory phase to stress-test the entire departure and arrival processes within the terminal and at the apron. CAG plans to open T4 to the public for sneak previews of the key features before it opens for operations.

A total of six airlines comprising both full service and low cost carriers have been earmarked to operate at T4. Together, these airlines have links to about 20 destinations in the region. They will operate almost 800 flights every week, serving more than seven million passengers. CAG expects a few other airlines to operate at T4 when it opens and forecasts up to 10 million passenger movements in the first years of operations. As the terminal has an annual handling capacity of 16 million passenger movements, there will be ample room to support the growth of the airlines operating at T4.

On the commercial front, leasing of the more than 80 retail spaces at the new terminal has also made good progress. Concessions in key retail zones which include the double-volume façade shops and heritage zone have already been taken up, with the leasing of the remaining retail spaces expected to be

completed by the end of 2016. The heritage zone will showcase retail and F&B brands with a local flavour, with its design paying homage to Singapore's unique cultural heritage while giving first-time visitors a

taste of old Singapore. T4 will encompass concessions that span numerous categories including fashion and jewellery, specialty concepts, electronics, and toys and kids concepts.



The installation of the final beams on the T4 pedestrian bridge across Airport Boulevard took months of meticulous planning and precise implementation to minimise inconvenience to road users.

### Launch of T4 pedestrian bridge

As part of CAG's plan to create new vehicle and pedestrian access to T4 as well as facilitate aircraft movements to and from new aircraft parking stands located on the opposite side of Airport Boulevard, three new bridges have been constructed over Airport Boulevard, the main road leading to the airport. Given the complex nature of this exercise, CAG's T4 project team and the appointed contractors embarked on a year-long process of planning, engaging stakeholders, preparing logistics and carrying out trials before commencing the actual bridge works.

A key challenge of the project was in managing the traffic flow on Airport Boulevard given that the bridge works were taking place in tandem with road use beneath it. Traffic had to be diverted to ensure the safety of

road users during construction. In addition, the team was faced with the time pressure of having to complete the installation of each bridge within a three-hour window, from 2am to 5am, when road traffic was lightest.

To achieve this, some 70 workers, two cranes and 10 trailers were deployed every night to aid in the construction works. The delivery of the bridge beams from Tuas to Changi Airport also had to be timed to precision as the 40-metre long beams which weighed up to 130 tonnes, required special lane closures during their journey.

Each beam took approximately 15 minutes to be lifted and secured in place. The first bridge was successfully put in place in October 2015, with the second bridge following in January 2016 and the final one in April 2016.

## UPCOMING DEVELOPMENTS



Jewel Changi Airport will feature plenty of park space comprising gardens, walking trails and playgrounds, catering to visitors of all ages.

### PROGRESS WITH JEWEL AND T1 EXPANSION

Jewel is a mixed-use complex featuring play attractions, retail offerings, a hotel and facilities for airport operations such as an integrated multi-modal transport lounge for fly-cruise and fly-coach passengers, as well as early check-in facilities. Its unique architecture and design, featuring a glass and steel façade, will be an iconic showpiece for Changi Airport.

Jewel will be home to the world's tallest indoor waterfall – the Rain Vortex – measuring 40 metres in height. It will also feature the Forest Valley – a breathtaking five-storey stepped-up garden filled with thousands of plants, making Jewel the first in Singapore to seamlessly integrate lush greenery with attractions and facilities within the same building.

Following the award of the construction contract in October 2014 to a joint venture formed by Woh Hup (Private) Limited and Obayashi Singapore Private Limited, progress of construction works on Jewel has been smooth. Piling works have been completed, and excavation works for five

basement levels are well underway. Structural works for the above-ground levels have also started. In addition, detailed interior design development work is in progress with mock-ups completed for several areas such as Jewel's façade, the Rain Vortex, the Forest Valley and the hotel.

To facilitate works for the basement car park ramps, and ramp access to the new basement taxi pick-up points shared by Jewel and T1, some roads have been diverted. T1's departure driveway has also been expanded to cater for higher traffic volume in future. The current T1 coach stand will be closed and its operations shifted to a temporary coach stand constructed at the expanded departure driveway. The overhead canopy meant for the expanded drop-off point at T1 and Jewel have also been constructed.

CAG's main contractor for the T1 expansion project, Takenaka Corporation, commenced site works in April 2015. The challenge is to carry out work without disrupting the round-the-clock operations in the terminal. As such, works have to be carried out in phases and facilities and services have had to be relocated.

The first phase of works for the T1 Departure Hall includes the replacement of two existing check-in rows and the construction of two new rows. To facilitate and create space for the works, a number of airlines were relocated, and a cluster of retail and F&B outlets were closed. The new Check-In Rows 11 to 14 are expected to be ready for use by the end of 2016.

In the Baggage Claim Hall, works to replace existing baggage claim belts, refresh the interior design, and expand the hall commenced in June 2015. The first new baggage belt was installed and commenced operation in April 2016. On the airside, to create space for the new fully-automated baggage handling system and related sub-systems, several offices were relocated. More than 10 new offices and facilities have since been constructed for partners and airside staff. The first phase of the new baggage handling system will be operationalised by the end of 2016.

### NEXT PHASE OF GROWTH FOR CHANGI EAST

Akin to building a new airport, the Changi East development is a longer-term infrastructure project which represents the next major

phase of growth for Changi Airport. The 1,080-hectare site will include the future Changi Airport T5, a third runway, as well as aviation facilities, tunnel systems, related infrastructure and transport links.

Land preparation works, commissioned by the Ministry of Transport, are progressing well, with site surveys, soil investigations, services detection and site clearance works ongoing. As the site sits on reclaimed land consisting of thick layers of soft marine clay which cannot support airport infrastructure and aircraft load, ground improvement works have to be carried out to treat and strengthen the soil at the site. The extension of the Runway 3 associated taxiways and other airfield civil works can then be constructed.

### Three-runway system by early 2020s

Currently supporting three terminals, with a fourth terminal opening in 2017, the airport's runway capacity will need to be increased to cater to continued growth in aircraft movements beyond this decade and to supplement the operations of the new T5. This will involve the conversion of an existing third runway, which is currently used by the military, for joint civilian-military use.

During the year, CAG launched the first of several packages of works to put in place the three-runway system by the early 2020s. In October 2015, the first package – a S\$1.12 billion contract – was awarded to a joint venture formed by Samsung C&T Corporation and Koh Brothers, following a competitive tender which saw participation from 10 tenderers.

The works to be carried out by the joint venture company include the extension of Runway 3 and new taxi ways to connect the former to Changi's existing two runways. The construction would involve close to 20 kilometers of pavement and

six kilometers of main canals, security fencing and perimeter roads, mechanical and electrical works, as well as supporting works such as major services and road diversions. Other works covered in the package include the construction of airfield drains to keep the runway and taxiways free of surface water and to prevent flooding, hence improving the safety and operational resilience of the airfield.

CAG has also issued a tender for a second package of works involving the construction of new taxiways to connect Runway 2 to the future T5, major drainage works, new navigation aids, airfield lighting systems and a fire station. The tender would be awarded in the third quarter of 2016.

### Safety first

Multiple contractors working within and outside the airfield in parallel increases the complexity of the Changi East construction works. Notwithstanding this, CAG pays close attention to ensuring that safety measures are in place. Dedicated safety supervision and inspection teams have been set up to monitor the ongoing services diversion and land preparation work. The safety teams, whose

strength has been boosted to 20, also work very closely with contractors to ensure both aerodrome and construction safety.

### Conceptual design of T5

The design plans for T5 have also picked up pace, with the completion of the functional design study for the new terminal such as the airfield and terminal layout, passenger flow and spatial requirements and facilities for passengers. Designed for an initial handling capacity of 50 million passengers per annum, the concept plan for T5 is based on a mega terminal and two satellite buildings with high operational efficiency for the terminal and airfield. T5 will bring the total handling capacity of Changi Airport to 135 million passengers per annum across five terminals when completed.

The next phase of the project will be to commence pre-qualification to appoint design architects for the terminal. A multi-agency planning committee, chaired by the Permanent Secretary of the Ministry of Transport, is also in place to discuss multi-disciplinary areas such as security provisions and requirements for the entire Changi East development and to coordinate efforts among government agencies.



Ground improvement works are being carried out to treat and strengthen the soft marine clay at Changi East.

# INTERNATIONAL PRESENCE



Brazil's Tom Jobim International Airport expands its operational capacity and services with the new South Pier.

Changi Airports International (CAI), CAG's international arm, provides consultancy services and invests in airports overseas. CAI collaborates with local partners to develop assets in Brazil, India and Russia. It also shares its expertise through ongoing and new airport projects in China, Middle East, Southeast Asia and beyond.

## INVESTMENTS

### Brazil

Tom Jobim International Airport in Rio de Janeiro continued to show marked improvements since concessionaire RIOgaleão, took over in August 2014. CAI holds a 20.4% stake in the concession company.

The airport team, together with CAI and the International Olympic Committee, ramped up preparations for the summer Olympics to be held in August 2016. The airport's newest boarding pier has 26 aerobridges, and the multi-storey carpark now has 2,700 additional car parking spaces.

Commercial areas were expanded with the addition of over 100 new shops and F&B outlets, including 8,000 square metres of duty-free space. The concessionaire also introduced new facilities, enhanced passenger flow, and launched its first mobile app for passengers.

Cargo operations improved. The airport became the first in

Latin America to participate in the International Air Transport Association's global certification programme for pharmaceutical products.

The airport obtained its operational certification in August 2015 from the Brazilian civil aviation authority, certifying that it meets standards and practices recommended by the International Civil Aviation Organisation.

Last year, the airport welcomed 60 new flights to seven new international and domestic destinations.

### India

Durgapur Aerotropolis is India's first private operational greenfield airport city. Located in West Bengal, it is developed by Bengal Aerotropolis Projects Limited (BAPL) in which CAI has a 36.3% stake.

The city's airport, Kazi Nazrul Islam Airport, received its operating

licence in May 2015. India's national carrier, Air India, launched a six-times-weekly Durgapur-Kolkata service in the same month. The flight was extended to the capital in December 2015 with a thrice-weekly Kolkata-Durgapur-Delhi service.

Work on the township infrastructure has started with Larsen & Toubro, one of India's largest engineering contractors, appointed to deliver the first phase of the development.

### Russia

2016 marked the 4<sup>th</sup> year of CAI's investment in Russia. CAI holds a 30% stake in a joint venture which owns four airports in Russia's Krasnodar region – Anapa, Gelendzhik, Krasnodar and Sochi – and their management company, Basel Aero.

The airports continued to witness strong growth in passenger traffic. In FY2015/16, the airports served almost nine million passengers, growing 13% since FY2012/13. Passenger traffic at Sochi International Airport, in particular, jumped 45% year-on-year.

Service improvement was high on the priority list. A large-scale service blueprinting project was launched in FY2015/16 to strengthen key touchpoints, develop training areas, and align service standards to international levels.

Commercial offerings were also enhanced. A joint venture with leading travel retailer, Dufry, led to the opening of four world-class duty-free and duty-paid shops in Sochi and Krasnodar. The F&B outlets in Sochi and Krasnodar were also revamped.

In March 2016, Anapa International Airport laid the foundation stone for its new 11,800-square-metre passenger terminal. The masterplan for the new Krasnodar airport was also completed, with a future regional hub comprising a 45,000-square-metre passenger terminal in Phase 1.

The commitment to offer a first-rate passenger experience resulted in all four airports clinching top spots for Best Airport in their respective traffic categories for the second time at Russia's National Aviation Infrastructure Show 2016.

Sochi also came up tops in the Airports Council International's Airport Service Quality (ACI ASQ) Awards 2015. It was named Best Airport in two categories – by Region (Europe, over 2 million passengers per year), and by Size and Region (Europe, 2-5 million passengers per annum; Europe).

## CONSULTANCY

### Saudi Arabia

CAI worked closely with its counterparts in the General Authority of Civil Aviation since 2008, to successfully manage and operate the King Fahd International Airport (KFIA) in Dammam in Saudi Arabia.

On passenger traffic, KFIA surpassed its competitor airport for the third consecutive year in FY2015/16, widening the gap to 11% from 7% the year before. Total passenger movements was almost 10 million passengers per annum, more than

double the volume since the start of the CAI partnership.

A new 1,850-square-metre retail outlet housing more than 50 international and local brand names was opened in 2015, along with three new airline lounges.

The airport also reported a steady growth in revenue. Non-aeronautical revenue grew by more than 2.5 times since 2008. Together with the local management team, CAI has turned KFIA into a profitable airport with positive EBITDA for three years running.

For the first time, the airport was recognised at the ACI ASQ Awards 2015, clinching the Most Improved Airport (Middle East) award and third place in the Best Airport by Region (Middle East) category.

### China

CAI was appointed as a consultant for the new Qingdao Jiaodong International Airport and the adjacent Ground Transport Centre in Shangdong. The new airport is slated for operations in 2019.

CAI developed the commercial strategy for the airport to optimise the penetration rate of the retail and F&B outlets and commercial revenues.

CAI provided new insights on passenger profiles, behaviour and preferences to develop a product mix and commercial layout which will put the airport's commercial offerings ahead of its competitors. CAI established detailed guidelines for the commercial shopfront design and introduced innovative retail concepts, to showcase the unique culture and homegrown brands from the region.

### Thailand

CAI was engaged by Bangkok Airways Public Company Limited in April 2015 to review the Samui Airport masterplan, optimise its operations and propose a new commercial plan. CAI made recommendations to align the passenger terminal layout with the masterplan to improve passenger flow, after conducting a capacity assessment to identify congestion points.

Using data analytics, CAI also proposed a commercial layout strategy to grow sales. This included a detailed retail configuration, concept, and a product mix that will best fit the passengers' profiles and their buying patterns. CAI also incorporated the airport's present architectural design into the plan to maintain its unique look, and identified new facilities that will take the airport into 2035.



Artist's impression of the contemporary central departure lounge of Thailand's Samui Airport.

## BUILDING 'HEARTWARE'



CAG's CEO Mr Lee Seow Hiang receiving the Randstad 'Most Attractive Employer' 2016 award from Ms Jaya Dass, Country Director of Randstad Singapore.

A big part of what makes CAG what it is lies in its people. Enhancing its employer branding is one key focus to position the company as an employer of choice, so that it can attract the best talent.

CAG's focus in building a strong employer brand was affirmed on 7 April 2016, when it was recognised as the Most Attractive Employer in Singapore by Randstad. According to the survey, contributing factors were financial health, good training, long-term job security, pleasant working atmosphere and more. Previously ranked fifth in 2013, third in 2014 and second in 2015, this recognition is an affirmation that CAG as an organisation is on the right track in engaging both existing and prospective employees.

With the rise of the digital age and social networking, CAG's employer branding strategies had to evolve to ensure it reaches out to the right target audience. To strengthen the employer and talent brand through creative storytelling, a series of

recruitment videos was created to promote and showcase the diverse nature of CAG's businesses. These videos gave a peek into the CAG culture while showcasing the exciting work environment in a personable way. They were also an extension of the primary employer brand video, which highlighted the key elements of CAG's employer value proposition.

The videos were promoted on multiple online platforms such as CAG's corporate career site and LinkedIn, as well as at various scholarship and recruitment fairs. Internally, to continuously improve on the quality of hires, a new talent solutions system was implemented to help CAG recruiters in their selection of candidates for Senior Manager positions and above.

On top of functional abilities and skill sets, this new system helps to profile candidates based on their organisational fit in accordance with the five CAG Leadership DNA Competencies – Relationship, Enabler, Direction, Execution and Drive.

A series of workshops was also introduced to ensure that hiring managers are equipped with the appropriate interviewing techniques. They were trained to use a structured approach to conduct interviews, taking functional competencies as well as adherence to CAG's Leadership DNA competencies into consideration. A total of 10 workshops were conducted during the year, benefitting over 100 CAG employees.

### Supercharging Terminal 'H'

With 1,800 employees and growing, CAG makes a concerted effort to cultivate and engage its people, who make up Terminal 'H'. Drawing the analogy from the various new infrastructure projects that CAG is

building, Terminal 'H' stands for the 'Heartware' of the organisation – its people. Through various initiatives, CAG aims to be a company that allows its talents to realise their dreams as it continues to invest in and develop the world's best airport.

To encourage CAG employees to adopt a healthy lifestyle, a series of activities designed to promote healthy eating, physical fitness and mental well-being was launched. These activities included nutrition talks, fitness Fridays, health awareness roadshows and terrarium workshops. A new programme, 'Stretch Your Moolah', was introduced during the year to allow divisions to customise and organise fitness activities at the division level based on their interests. The option to participate in these activities in a group contributed to a higher participation rate, with about 400 employees taking part in the programme within a three-month period.

Another way CAG takes care of its people is through passing on valuable knowledge and ideas



Viola Tan, co-founder of Love, Bonito sharing her entrepreneurial experiences at the CAG Learning Festival 2015.

through its Learning Festival. Held over a week from 26 to 30 October 2015, illustrious keynote speakers such as Ho Kwon Ping (founder of the Banyan Tree luxury hotel chain), Hian Goh (co-founder of Asian Food Channel) and Felix Loh (Chief Operating Officer of Gardens by the Bay) shared their wealth of experience with the participants. Several start-ups from various sectors were also invited to share

their start-up journeys and ideas. Not forgetting its own staff, CAG also encouraged speakers from within the organisation to share their personal stories and experiences in Changi with their fellow colleagues. The Learning Festival has seen increasing participation year after year. The FY2015/16 run saw a 50% increase in participation compared to the previous year.



### Keeping In.Touch

An initiative to facilitate greater employee engagement was the launch of the In.Touch mobile app in August 2015. Through the app that is exclusive to CAG, employees are able to share and discuss news and ideas with one another, promoting an organisational culture of open sharing between divisions, as well as across the different staff levels. Employees are also able to hear directly from members of CAG's senior management and receive first-hand news about the organisation from the various divisions.

To date, about three-quarters of CAG employees have downloaded the app. Senior management has also demonstrated its support by actively sharing stories and breaking news about CAG. Sharing by staff continues to gain good traction, as posts have been met with encouragement by other staff members from all over the organisation. The app has enabled the exchange of information and contributed to building team spirit and cohesiveness among employees.

CAG's newest In.Touch application promotes employee engagement.



## COMMUNITY & SUSTAINABILITY



CAG organises a screening of the latest Star Wars movie for NorthLight School students and their loved ones.

As a major organisation in Singapore, CAG is cognisant of its corporate responsibility to the community and the environment. We believe that the company and its employees can all play a part to improve the lives of Singaporeans and to ensure that the airport's operations contribute to environmental sustainability.

### Community outreach

Since 2012, Changi Foundation, the philanthropic arm of CAG, has been actively supporting community projects for disadvantaged youths – its adopted social cause. With the vision of 'Connecting with youths today, empowering them for a better tomorrow', Changi Foundation aims to prepare disadvantaged youths for future employment so that they can in turn contribute back to society later in life. Via its three thrusts of 'Strengthening Foundations', 'Engaged Philanthropy' and 'Driving Paradigm Change', more than 3,000 youths have so far benefited from the funding provided by the Foundation,

as well as the various programmes and activities that the Foundation has organised.

Under the first thrust, 'Strengthening Foundations', Changi Foundation awards the bond-free CAG-Howe Yoon Chong Book Prize annually to underprivileged youths to pursue tertiary education. With education as the bedrock, CAG hopes to equip underprivileged youths with the right skills and knowledge to set them down the right path and help them work towards a better future. In addition, Changi Foundation also gives out annual bursaries to youths from families facing financial difficulty, to offer some relief as they continue with their schooling.

Since Changi Foundation's inception, a total of 359 students from our partner beneficiaries – Assumption Pathway School, NorthLight School, Students Care Service and CARE Singapore – have received the Book Prize award, and 871 students have received bursaries. Of these, 405 were given out in the past year.

Under the second thrust 'Engaged Philanthropy', Changi Foundation has taken on a holistic approach in its partnership with its main beneficiary, NorthLight School, covering areas such as Foundation, Character and Vocational Education. CAG invests in the programme not only with funding but also through its strong staff volunteerism efforts.

As part of Foundation Education, numeracy and reading programmes were conducted during the year for Year 1 and 2 students, where CAG volunteers tutored students who were weaker in math and reading through structured weekly one-to-one sessions.

In the area of Character Education, Changi Foundation's programmes are aimed at inculcating positive values through mentoring. Year 2 students who attended the Youth Passport Programme hosted by CAG volunteers were exposed to Changi Airport's customer-centric service philosophy, gaining insights into possible career opportunities at the airport.

Finally, under Vocational Education, Year 3 students attended the Career Development Programme which helped prepare them for the working world. CAG volunteers led training sessions to equip the senior students with the necessary skills to ace their job interviews upon graduation.

Selected students also underwent a five-day job attachment programme which exposed them to the working environment, honing their job readiness in a real-life

setting either with CAG or one of its many partners. In FY2015/16, CAG brought onboard five more airport partners – Jet Quay, Plaza Premium Lounge, 1983 Café Nanyang, Focus Network Agencies (The Cocoa Trees) and Times NewsLink – to provide job attachment opportunities for these students.

Under the last thrust 'Driving Paradigm Change', Changi Foundation supports innovative programmes which address current societal or systemic gaps, while bringing about paradigm shifts in youth development work. One such programme is Saturday Night Lights (SNL), which uses football to reinforce values such as discipline and teamwork. It also provides a safe and conducive environment for the youths to spend their Saturday evenings among positive company.

The SNL programme brought together about 50 youths during the year, under the mentorship of professional coaches and CAG volunteers. Four of CAG's airport partners – Certis CISCO, Times NewsLink, Airport Police Division and SIA Engineering Company – also participated in SNL on 5 September 2016 to allow students and their staff volunteers to bond over football.

Over the year, CAG also collected about S\$300,000 in public donations through its 33 Changi Foundation donation boxes located around the airport. To commemorate Singapore's 50<sup>th</sup> anniversary, CAG had previously announced that it would match the donations by five times the collection and this gave a boost to the donations coming in. As a result, a total of S\$1.8 million were contributed to Changi Foundation in 2015 and this will go towards funding its community programmes.

### Sustainability efforts

CAG embraces sustainability as a fundamental part of its business model. To ensure that the airport

continues to expand its network to the rest of the world in a way that minimises its ecological footprint, CAG actively implements green initiatives to ensure sustainable growth for generations to come.

CAG's environmental policies provide a solid foundation on which it builds its energy, water, waste and noise management efforts. The policies also guide all activities performed at the airport to ensure that they are carried out with minimal impact to the surrounding environment and communities. On top of daily operations, sustainability is also carefully taken into account in the airport's future plans and developments.

In September 2015, CAG successfully achieved the Green Mark Gold re-certification for T3. The Gold status in the Green Mark scheme incorporates internationally recognised best practices in environmental design and performance. This demonstrates CAG's commitment and efforts to bring about continuous improvement in carrying out its business in a sustainable manner,

especially in the areas of design, construction and operation of its terminal buildings.

Changi Airport's third annual airport-wide Recycling Day was organised on 5 and 6 November 2015, during which 18 airport partners came together to do their part for the environment. More than six tonnes of recyclables were amassed over the two-day event, an increase of two tonnes over the previous year. After three annual runs, the event has started to gain traction among the airport community, especially for e-waste recycling, with more companies expressing their interest in participation.

As a declaration of commitment towards environmental sustainability, CAG participated in the Earth Hour for the eighth year running on 19 March 2016. All decorative lights within the airport were switched off and non-critical operational lights were dimmed from 8.30pm to 9.30pm that evening, in support of this global environmental awareness movement.



CAG volunteers engage NorthLight School students through interactive activities during the Reading Programme.

# ENGAGING FANS AROUND THE WORLD



Changi Airport's Facebook page crossed the 1 million Page Likes milestone in January 2016.

It was a record year for Changi Airport on the social media front as well. Changi's Facebook page crossed the milestone of one million Page Likes; the team succeeded in creating massive online buzz around the globe with key activations such as Star Wars at Changi; and clinched four awards for its social media achievements over the year.

CAG continued to engage and excite its followers by serving up a steady stream of informative and inspiring content to grow Changi Airport's online presence through its Facebook, Instagram, Twitter, LinkedIn, WeChat and Weibo channels.

During the year, Changi's Facebook page grew 82% to a record 1,178,451 Page Likes. The number of followers on Changi's Twitter channel increased 40% to 49,201 followers while its Instagram channel almost doubled its base to a high of 57,808 followers. In the same period, the number of followers on Changi's LinkedIn increased an impressive 118% to 31,456 followers. Changi also

continued to strengthen its social media presence in China, growing its fan base on Weibo to over 250,000 followers, and starting its own WeChat channel which is fast becoming another effective platform for fan engagement. All in, Changi Airport has amassed more than 1.6 million online fans around the world.

Even with a much larger community of internet users worldwide, CAG continued to maintain excellent engagement levels through interesting content on its social media platforms, turning each page into a place where fans could readily connect with the brand, and also for the airport to extend its Changi Experience online.

## Social media awards won in FY2015/16



**'Best Use of Digital Media'**  
**(Gold)**

HumanResources Asia  
Recruitment Awards 2016



**'Best Use of Social Media'**  
**(Silver)**

PRWeek Awards Asia 2016



**'Best Use of Social Media'**  
**(Silver)**

PR Awards 2016



**'Best Use of Bloggers'**  
**(Silver)**

PR Awards 2016



**Changi 360** – a panoramic video of the entire Changi aerodrome filmed from the iconic Changi Tower – was released on YouTube for the first time, inspiring many who in turn shared it with their friends and family.



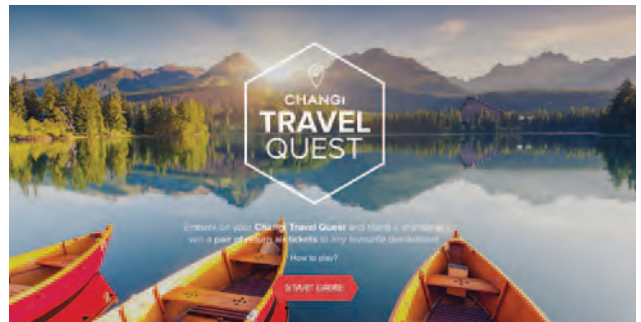
To excite shoppers about Changi's extensive retail offerings, CAG rolled out the original **#ChangiBarepackers** campaign. Local influencers were issued a challenge – to show up at the airport with an empty suitcase, and purchase all that they would need for a trip to a mystery destination, at Changi. The bloggers' shopping exploits-turned-webisodes resonated with the campaign's target audience, and prompted the team to explore a Season II in Changi's key country markets.



An exciting series of **What's the Price** flash contests on Facebook challenged the public's perception of the prices of beauty products at Changi Airport. This online campaign helped to remind shoppers that beauty products can be up to 40% cheaper at Changi compared to downtown stores.



**Behind Changi** – a series of six webisodes featuring local actress-host Michelle Chia, brought followers on behind-the-scenes tours of the airport, profiling the less-known occupations. The series proved to be highly popular with viewers, garnering a total of 11.5 million views across all social media channels.



The **Changi Travel Quest** Facebook application proved to be Changi's most successful Facebook-hosted contest. Designed to test online users' knowledge of Changi's connectivity in a fun and engaging manner, the contest registered close to 13,000 participants who spent a daily average of seven minutes playing the game.



The highlight of the year's social media programme was in conjunction with Changi Airport's year-end **Star Wars at Changi** campaign. A series of social media posts providing teasers on what's to come, the arrival of an All Nippon Airways R2-D2 jet and live updates of the launch parade contributed to a hugely successful launch event with unprecedented print, online and TV coverage, and social media buzz around the world.