

Business and Operations Review



CHANGI



AFRICA

Eastern Africa

Burundi
Ethiopia
Kenya
Mauritius
Rwanda
Tanzania
Uganda

North Africa

Chad
Seychelles

South Africa

Botswana
Congo
Mozambique
South Africa

West Africa

Burkina Faso
Ghana
Ivory Coast
Niger
Nigeria
Republic of Congo
Zimbabwe

ASIA

Central Asia

Turkmenistan*
Uzbekistan

Middle East

Bahrain
Egypt
Qatar
Saudi Arabia
United Arab Emirates

Northeast Asia

China
Hong Kong, SAR
Japan
Macau
South Korea
Taiwan

South Asia

Bangladesh
Bhutan
India
Maldives
Nepal
Sri Lanka

Southeast Asia

Brunei Darussalam
Cambodia
Indonesia
Laos
Malaysia
Myanmar
Philippines
Thailand
Vietnam

SOUTHWEST PACIFIC

Australia
Cook Islands
Fiji
New Zealand
Norfolk Island
Papua New Guinea
Samoa
Solomon Islands
Tonga
Vanuatu

28

CITY LINKS

127

CITY LINKS

67

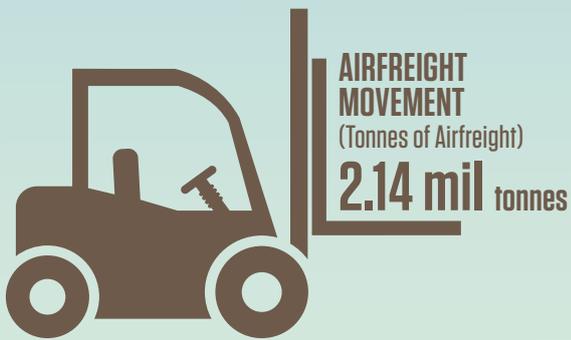
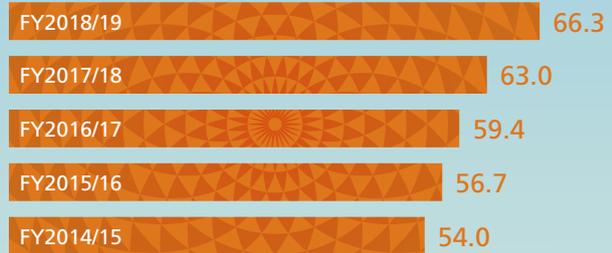
CITY LINKS



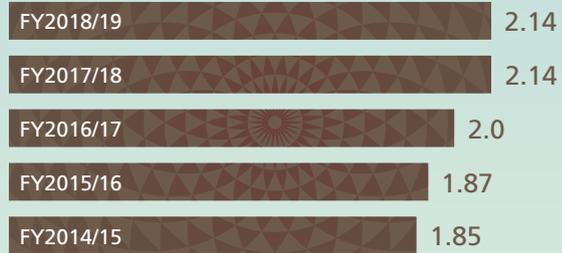
Air Traffic Statistics



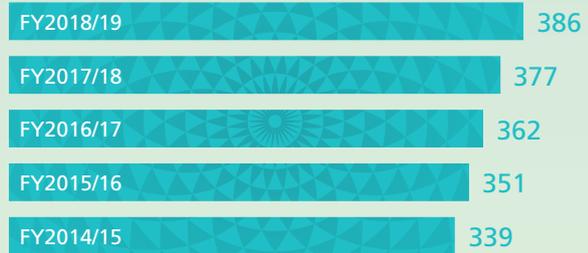
(in millions)



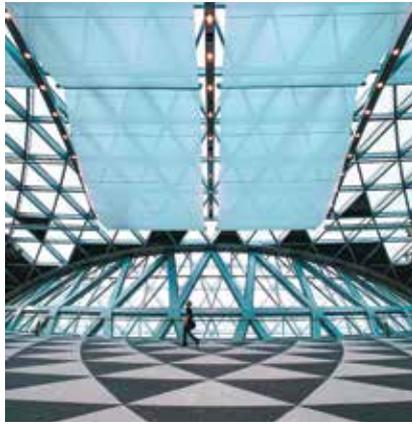
(in millions)



(in thousands)



@changiairport on Instagram



253k

FOLLOWERS

Connecting The World

MAKING THE WORLD SMALLER

It was another year of healthy growth for the aviation industry, on the back of reasonable oil prices and sustainable profits for the global airline industry.

Changi Airport registered a strong performance, handling a record 66.3 million passenger movements in FY2018/19, up 5.2% over the last year. Aircraft movements rose 2.3% to reach 386,000 flights. Traffic to all regions saw growth, with double-digit increases for the Americas (+22%), Europe (+16%) and Africa (+13%).

Among Changi's top five markets (Australia, China, Indonesia, Malaysia and Thailand), China and Australia both moved up a notch to take the second and fourth spot respectively, compared to the same period last year. The top five routes by passenger movements were Kuala Lumpur, Bangkok, Jakarta, Hong Kong and Manila.

During the year, four new airlines – Guangxi Beibu Gulf Airlines, Juneyao Airlines, LOT Polish Airlines and Shandong Airlines joined Changi's family of over 100 airlines. Nine new city links were also established to China (Nanchang, Xuzhou), Germany (Berlin), India (Guwahati, Pune*, Vijayawada*), Indonesia (Belitung*), Thailand (Chiang Rai) and Poland (Warsaw).

* This service has since ceased operations.





Above: Singapore is now directly linked to Poland with LOT Polish Airlines' non-stop service to Warsaw.

Left: Jetstar Asia is the sole carrier operating direct services between Singapore and Xuzhou.



DEEPENING LONG-HAUL CONNECTIONS

Singapore's connectivity with Europe was strengthened, with Scoot launching four weekly services to Berlin, and LOT Polish Airlines commencing non-stop services to Warsaw. With LOT Polish Airlines' new service, Singapore is now directly connected to Poland. From its base in Warsaw, LOT Polish Airlines provides connectivity to more than 40 cities in Central and Eastern Europe, expanding the range of onward destinations available to passengers from Singapore.

As part of ongoing efforts to promote the Singapore-Warsaw route, a marketing campaign 'Polish Your Polish' was rolled out in March 2019, targeting Singaporeans to increase their awareness of LOT Polish Airlines' service and Poland as a travel destination. The campaign took on a gamified approach

and encouraged participants to pick up the Polish language in an interactive manner, featuring Singapore World Beatbox champion Dharni Ng.

With the addition of the Berlin and Warsaw services, Changi Airport is now connected to 19 cities in Europe. As a result, weekly seat capacity to Europe increased by 15% from the previous year.

On the ultra-long-haul front, Singapore Airlines launched the world's longest flight to New York (Newark Liberty International Airport) in October 2018 followed by a non-stop service to Los Angeles in November. United Airlines also added a second daily non-stop service to San Francisco. Today, Changi Airport has 41 weekly non-stop services between Singapore and United States, a significant increase from none just two years ago.

STRENGTHENING CHANGI'S ROLE IN THE REGION

Asia continues to be a key driver of growth for Changi Airport. In FY2018/19, 6.9 million passenger movements (+8%) were registered between Singapore and China, and 4.9 million passenger movements (+11%) between Singapore and India. Total passenger traffic from China and India accounted for close to a fifth of total passenger traffic at Changi Airport.

With new links to Guwahati, Nanchang and Xuzhou, Changi Airport is now connected to 37 Chinese and 15 Indian cities, a new record high. In particular, the Singapore-Guwahati service was a significant milestone as Guwahati is Changi Airport's first air link to Northeast India. The new service connects Singapore directly to the state of Assam.

During the year, CAG embarked on a new initiative to work with travel agents to offer charter flight services to new destinations in China, such as to Guiyang, Xuzhou and Zunyi. These charter services are key to cultivating demand to new cities and paving the way for scheduled services. Charter services to other Chinese cities such as Hefei, Hohhot and Yichang are also being explored.

GROWING TRAVEL DEMAND WITH OUR PARTNERS

CAG made inroads to grow the inbound fly-cruise sector in FY2018/19. CAG, Costa Cruises and Singapore Tourism Board entered into a four-year tripartite partnership which leverages Costa's global presence, Singapore's cruise hub status and Changi Airport's air hub connectivity to enhance Southeast Asia's appeal as a cruise destination. Joint-marketing campaigns and attractive packages rolled out in various markets in Europe and Americas are expected to bring in over 112,000 international fly-cruise visitors to Singapore over the next four years.

In December 2018, Changi Airports International (CAI) was awarded the contract to operate Fukuoka Airport and CAI took over the operations at the airport in April 2019. With this new development, Fukuoka International Airport embarked on initiatives to grow its catchment traffic with strategic partners, starting with a collaborative partnership agreement between CAG, the airport and Singapore Airlines. Joint marketing activities by the three parties aim to grow travel between the Kyushu region to Singapore, Southeast Asia and beyond.

For its efforts to grow and market the Singapore air hub, Changi Airport was crowned the winner in the 'Over 50 Million Passengers' category at the World Routes Marketing Awards 2018. The annual awards recognise excellence in air hub marketing.

CHANGI AS A CARGO HUB

In FY2018/19, Changi Airport handled 2.14 million tonnes of airfreight throughput. Against the backdrop of the slowdown in world trade and a challenging global air freight market, import, export and transshipment flows at Changi Airport remained flat for the year.

Changi Airport serves 24 cargo airlines operating over 320 weekly scheduled freighter flights, linking Singapore to 48 cities. In October 2018, FedEx Express introduced eight weekly flights between Singapore and Sydney, bringing FedEx Express' network in Singapore to 50 weekly flights. The added capacity represents an incremental growth of more than 60% to Changi's freighter capacity on the Singapore-Australia route, strengthening Singapore as a gateway to the Southwest Pacific region for cargo flows.

CAG continues to enhance Singapore's pharmaceutical handling capabilities with the Pharma@Changi air cargo community. These include dialogue sessions on best practices in pharmaceutical transportation and feedback review sessions at the annual Pharma Shipper forum organised by CAG. CAG is also a Strategic Member of Pharma.Aero, which facilitates cross-industry collaboration among pharma shippers, cargo communities, airport operators and other air cargo industry stakeholders towards the achievement of excellence in reliable end-to-end air transportation for pharmaceutical shipments.

On the e-commerce front, CAG has been collaborating with various agencies such as the Economic Development Board, Enterprise Singapore, and seaport operator PSA to anchor cross-border and intermodal e-commerce cargo flows.

Changi Airport was awarded the 'Airport of the Year' at the World Air Cargo Awards 2018 for the first time, as well as 'Best Green Airport' and 'Best Airport – Asia (over 1 million tonnes)' at the Asian Freight Logistics & Supply Chain Awards 2018.



Left: FedEx Express expanded its flight network in Singapore with the introduction of eight weekly flights between Singapore and Sydney.



Open mind, successful partnerships

As the region's premier gateway, growing connectivity to cities around the world is key. Changi Airport engages with airlines to expand their networks here, and works with like-minded partners to drive passenger demand through Changi.

These responsibilities lie with staff members like Alicia Chen, Senior Manager with the Airline Development Team in CAG's Air Hub Development Cluster. For her, the challenge lies in "aligning the stars" to realise a route, based on passenger demand and airlines' interests, and managing surprises and the unexpected.

One notable occurrence was in 2012. One of her airline accounts had unexpectedly decided to downsize its operations at Changi as part of network restructuring. As it is a major partner for many others at Changi, Alicia and her team immediately engaged the airline and others that were directly affected to put in place measures to cushion the likely dip in passenger traffic.

Changi continued to engage the airline closely over the next few years. In 2017, it announced a comeback at Changi, expanding its network and capacity. The team welcomed back this long-time partner and collaborated on joint promotions to boost traffic. Alicia says this positive development was a team effort and marked a highpoint in her CAG career.

Overall, Alicia notes her job has transformed how she assesses and manages situations, and that relationship-building is key. She shares, "The environment is dynamic, and I have learnt to keep an open mind because sometimes, even if things don't go well now, it doesn't mean they will not work out later."

Alicia Chen
Senior Manager,
Airline Development



Opposite Page: Changi's Wizarding World mesmerised both the young and young-at-heart with a daily snow and fireworks show at a wintry Hogsmeade Village-inspired setup at T3 Departure Hall.

Left: The Changi Lounge, located opposite the Jewel Early Check-in Lounge, is the first lounge operated directly by CAG.



T1 coach stand started operations in October 2018 with a total of 54 coach bays – a 20% increase in capacity. To enhance the passenger experience at Changi Airport, the new T1 and Jewel car park opened in November 2018, bringing another 2,500 parking spaces. There are now over 8,000 parking spaces across the entire Changi Airport.

DELIVERING INNOVATIVE EXPERIENCES

Jewel fully opened on 17 April 2019. Apart from attractions for travellers and visitors, it also houses aviation facilities to bring more convenience to passengers flying through Changi.

The Changi Lounge at Level 1 allows fly-cruise and fly-ferry passengers the convenience of checking in at the airport for their cruise or ferry and seamless baggage transfers to the maritime terminals, with their baggage delivered directly from the airport on arrival. While in the lounge, passengers can take advantage of shower facilities, refreshments and comfortable seating to refresh themselves between their flight arrival and cruise or ferry departure.

Adding to the hassle-free experience, passengers flying with over 20 airlines at Changi Airport can now check in up to 24 hours before their flight at the Jewel Early Check-in Lounge. This represents 70% of departing passengers who are currently eligible for early check-in. The early check-in facilities at Jewel are made possible with the upgrading of the baggage handling system at T1 to a fully automated Early Bag Storage System. The services are available from 6.00 am to midnight daily, and up to 400 passengers can use the facilities every hour.

The development of Jewel also presented an opportunity to set up an innovation space to tell the Changi Airport story through fun-filled experiences. Housed on Level 4 of Jewel, the Changi Experience Studio (CES) is a state-of-the-art aviation-themed attraction that takes visitors on a journey of fun and discovery through the virtual world of Changi Airport. A brand-new concept, the studio was conceived and designed by CAG to tell interesting stories of Singapore's air hub and the inner workings of the airport in a way that brings wonder and

delight to all. Consisting of over 20 different touch-points and 10 zones spread over 3,000 square metres, the studio uses cutting-edge technology to present an eclectic mix of sensory experiences, including interactive games, projection storytelling, immersive shows and gallery exhibits.

Capturing delightful moments at Changi Airport, CAG launched its own souvenir store, allowing visitors to bring a memento of Changi Airport home with them. Located next to the CES, Gift by Changi Airport carries original commissioned Changi-themed merchandise, including unique souvenirs such as fragrance products featuring the familiar Changi Scent, Changi gardens-themed chocolates, as well as magnets, pouches and coasters designed by local artists.

CREATING MAGICAL MOMENTS AT CHANGI

The year-end holiday season is always an exciting time at Changi Airport. Visitors were treated to a magical 'Wizarding World Holiday' at the world's first ever Harry Potter and Fantastic Beasts event held outside a theme park during the year-end festive season. Fans were transported into the enchanting world as the T3 Departure Hall transformed into a wintry Hogsmeade Village, depicting the picturesque town with snowy rooftops set against the backdrop of the grand Hogwarts castle. The elaborate set would come alive in a daily snow and light show, where the iconic Hogwarts Express train lights up, taking fans on a magical adventure.

Collaborating with South Korean illustrator Sungan Park to create lifelike hand-drawn illustrations, captivating life-sized setups of familiar scenes in the Harry Potter and Fantastic Beasts films such as Diagon Alley and the Whomping Willow located across the different terminals at Changi delighted fans and visitors. Visitors even got a

chance to experience a Hogwarts student's life by dressing up as a wizard, learning how to cast a spell and practising their Quidditch skills at Diagon Alley at T3.

To complete the experience, fans could also bring home a memory of their spellbinding adventure at Changi Airport with Wizarding World plush toys and cushions, including an exclusive Gryffindor scarf. At the end of the festive season, close to 120,000 premiums were redeemed.

The popular setup attracted over 380,000 visitors across 52 days and more than 56,000 were mesmerised by the Hogsmeade Village daily snow and light shows.

CELEBRATING A LABOUR OF LOVE

T4, Changi's newest terminal, marked the year by unveiling the airport's newest play area. Standing at 15 metres tall, the five-storey crimson red playground – Chandelier – is a double-helix net structure that promises fun and play for all at the terminal's transit area, taking the stress off travelling and transforming the Changi experience to one that excites.

Riding on the positive feedback on the six-minute musical *Peranakan Love Story* which plays at the T4 Heritage Zone, CAG launched *Nanyang Blossom*, a film set in the 1830s Lion City that tells of a heroic romance tale between two young migrant workers from

China. Produced by the same renowned team that brought together *Peranakan Love Story*, the film plays every 30 minutes, delighting passengers as they start their journey. For international travellers, the film gives a unique glimpse into Singapore's heritage and culture, offering an authentic sight of Singapore without even stepping out of the airport.

A ONE CHANGI SYMPHONY

At Changi Airport, every member of the over 50,000-strong airport community plays an important role in creating the best passenger experience possible. Every year, Changi Airport receives more than 40,000 compliments from passengers whose lives have been touched by these dedicated airport staff. From saving lives to averting potential theft cases, time and again, such exemplary acts have been commended at Changi Airport's Annual Airport Celebration. As Changi Airport continues to grow, it is vital for the over 200 airport partners and agencies to work in synergy and close collaboration. This spirit of collaboration is fueled by the ONE Changi initiative, which serves as the driving force behind CAG's continuous pursuit of service excellence.

To strengthen the ONE Changi work culture and encourage service excellence, CAG works closely with its key airport partners. In 2018, CAG partnered the Immigration and Checkpoints Authority (ICA)

Left:

Changi's service staff lauded for their exemplary acts of kindness in the Annual Airport Celebration 2019 graced by Dr Lam Pin Min, Senior Minister of State, Ministry of Transport and Ministry of Health.

and Certis Aviation Security to launch the Make Someone's Day campaign with the aim to enhance the immigration experience of passengers passing through Changi Airport. Officers were encouraged to create delightful moments through simple but thoughtful gestures, such as a bright smile or a warm greeting, and were rewarded with tokens of appreciation for making a passenger's day brighter. With active participation from more than 1,300 ICA and Certis officers, the campaign received positive feedback with more than 1,700 service act nominations received over three months.

BUILDING TO SERVE YOU BETTER

To meet the growing demand for air travel, CAG will be expanding T2, which was last refurbished in 2003. The project will increase the terminal's capacity by up to five million more passengers a year, to 28 million mppa. With the introduction of more automated check-in kiosks, biometric-enabled bag-drop machines and automated immigration gates, travellers can look forward to greater convenience and a seamless travel journey. Works will start at the end of 2019 and are expected to take up to five years.





FAST and streamlined departure experience

The opening of T4 marked the deployment of the full suite of Changi's Fast and Seamless Travel (FAST) self-service options for departing passengers. Chua Ching Hock was Senior Manager with the T4 Operational Readiness and Airport Transfer (ORAT) team at the time, overseeing key projects like the implementation of FAST and T4's opening.

"As FAST is a pilot initiative, we employed design-thinking strategies to build the automated machines and the user interface," said Ching Hock. They had to be user-friendly, intuitive and visually appealing.

Through it all, Ching Hock says passengers' needs were always at the heart of the team's decisions. Over the course of his 11-year CAG career, Ching Hock has seen a transformation within Changi's Airport Operations Division. As Changi's passenger numbers grew, rather than just increase staff numbers to meet increasing demands, CAG leveraged on automation and data analytics as key solutions.

"The scope of work within the division evolved as managing automation programmes entails a different set of skills. Besides being familiar with the systems, you must also look at how to use the data collected to further improve passenger experience."

Looking back, the father of one says his four years with the T4 team was a defining experience. "It is not every day that one is involved in the opening of a terminal, perhaps only once every 10 years. T4 is like my 'second baby'!"

Chua Ching Hock

Senior Manager,
Departure Experience,
Airport Operations

Re-inventing The Changi Retail Experience

PLETHORA OF DELIGHTS TO THRILL PASSENGERS

over 1.4 million entries, solidifying its place as Changi Airport's most popular promotion. With an overarching Luck is Everywhere campaign concept, travellers were greeted with lucky charms like rainbows, four-leaf clovers and prosperous '88' butterflies around the terminals. Every qualifying spend entitled shoppers and diners a shot at winning one of two grand prizes – S\$1 million cash or the new Jaguar E-PACE, among other attractive instant prizes. At the end of the promotion, 14 finalists competed in the ultimate showdown of luck with a game of Scissors, Paper, Stone. Chinese shopper Chen Rou Jing was eventually crowned the ninth Changi Millionaire, while Cao Zheng, also from China, became the owner of the new Jaguar luxury compact performance SUV.

To strengthen Changi's position as the go-to destination for families, the airport's resident children-centred programme, Changi Loves Kids, brought the lovable Sesame Street gang to the airport together with a range of fun-filled activities and events for the school holidays. Families were treated to a first-in-Asia Sesame Street pop-up exhibition, a 30-metre-long inflatable playground and larger-than-life Gachapon machines.

In June, Changi Airport was home to Singapore's largest cardboard exhibition featuring scaled replicas of famous landmarks in Central and Eastern Europe. The exhibition was the backdrop for the world premiere of the S is for Sharing Sesame Street live show. Almost 10,000 families enjoyed the show and met with Sesame Street characters Elmo, Cookie Monster, Bert and Ernie, Count von Count and Abby Cadabby as they made their appearance in Changi. Organised as part of the Discover the Fun Side of Changi

Right: The S is for Sharing Sesame Street live show saw characters such as Elmo and Cookie Monster enthral audiences young and old.



Concession sales at Changi Airport hit an all-time high of S\$2.8 billion in FY2018/19, registering an 8.1% year-on-year increase. Driven by strong passenger growth, breakthrough collaborations and the pursuit for retail excellence, Changi Airport remains a world-class retail destination.

With over 500 shopping and dining options spanning across 90,000 square metres of commercial space, Changi Airport continues to push the frontiers of retail to delight travellers and airport visitors.

REWARDING RETAIL EXPERIENCES

To excite and bring shoppers and diners even more unique experiences, airport-wide events continue to be the mainstay at Changi Airport. Besides attracting more people to Changi, these one-of-a-kind activities add to the airport's outstanding array of retail offerings.

Changi's anchor shopping promotion, Be a Changi Millionaire, continues to create excitement and buzz among the airport's travellers and visitors. The latest installment attracted well

with Sesame Street activation, visitors had the opportunity to get their hands on limited-edition collectibles such as Sesame Street-themed notebooks, storage boxes, activity packs and even fun 'passports' where children collected stamps for every completed activity. Overall, Changi Airport attracted close to 3.5 million people to its public areas through the Sesame Street promotion. The campaign was also recognised as the Best F&B Marketing & Promotions Campaign of the Year at the FAB (Food and Beverage) Awards 2019.

Not forgetting the adults, for the first time, Changi Airport visitors and football fans got the chance to watch 33 World Cup matches 'live' in air-conditioned comfort at T3. Lined with soft carpet, cosy inflatable seats and lounge chairs, and a seven-metre by four-metre high-definition ultra-large LED screen, fans immersed themselves in the football action, stadium-style. Football fans packed the event area, especially during matches between top footballing nations. On the day of the World Cup Final, more than 600



fans gathered to cheer for their favourite teams.

Changi Airport's loyalty programme Changi Rewards contributes significantly to the rewarding retail experience at the airport. To reward fans who shop and dine at Changi Airport regularly, a number of new benefits were introduced in FY2018/19, including the Changi Rewards Sure-Win game, free parking benefits, 1-for-1 dining privileges and airport lounge access specially curated for different membership tiers. With a brand new website and refreshed interface on the iChangi mobile application, members can conveniently retrieve their Changi Rewards e-card and redeem a host of attractive rewards. At the end of the financial year, the membership base of Changi Rewards doubled from a year ago to cross the 1-million member milestone.

REINVENTING RETAIL AT THE AIRPORT

In the digital age where instant gratification is the norm and experiences play a significant part of the retail experience, Changi

Airport continues to capture the hearts of travellers and airport visitors with innovative concepts and a robust retail mix strategy.

A key pillar for Changi Airport, the Changi 1st programme has been delighting passengers with the latest product drops and the most exclusive experiences. Working together with its retailers and brands, Changi Airport presented a total of 13 Changi 1st outposts in FY2018/19. Prada debuted its Prada Voyage pop-up where travellers enjoyed photo opportunities with a life-sized vintage plane, while Dior created a virtual swimming pool photo booth and incorporated various digital elements for its Joy by Dior fragrance pop-up. Five world's-first product launches also made their appearances at Changi Airport – travellers were wowed by the Aberfeldy Exceptional Cask Vintage 1999 whisky, Lancome La Vie Est Belle Flowers of Happiness fragrance, Miu Miu Twist Eau de Parfum, Shiseido Ultimune 2.0 essence and SKII Genoptics Spot Pen. Breaking the monotony in travel retail, Changi's unique

initiative has also allowed brands to better engage with their fans, increase exposure and boost sales.

Changi Airport has also stepped up its offerings at the public areas. A well-loved destination within the airport that attracts more than half of the airport's meeters and greeters, T3 B2 was refreshed with an update to its retail mix. The improvements included the introduction of a new event space and indoor garden. Created as the focal point of T3 B2, the community space ST3PS features a spacious stepped seating area and an ultra-high-definition screen for movies and live sports matches. To generate even more excitement, activity programmes such as 'live' music performances, fitness classes and large-scale school holiday events were added to list of weekend activities.

When it comes to dining options, families are also spoiled for choice with a bumper crop of 12 new brands featuring a wide range of cuisines and genre joining Changi. These include aviation-themed food hall concept Terminal M by MOF, Japanese two-in-one concept Ramen Champion & Hokkaido Paradise, Hong Kong café Tai Cheong Bakery and dual-concept restaurant Le Shrimp Ramen and Canton Paradise Noodle & Congee. With the new outlets, T3 B2 now features some 50 retail and F&B outlets offering a plethora of products and services to delight visitors and travellers.

DUTY-FREE SHOPPING AT YOUR FINGERTIPS

As the world of e-commerce becomes more competitive, iShopChangi continues to keep up to speed with changing consumer behaviour and shopping trends. To elevate the online shopping experience, iShopChangi launched a revamped website interface with new features including a more

visually-enticing web store design, seamless integration with the Changi Rewards loyalty programme and a hassle-free checkout process. With the new site optimised for mobile browsing and tailored to individual customer profiles, duty-free shopping with Changi has also become more intuitive and personalised.

With an eye on offering customers more choices, the e-commerce portal has onboarded 35 new concessions and expanded its product range to over 20,000 items from more than 800 brands. Singapore residents who have enjoyed the convenience of the e-store's delivery service now also have access to an extended range of products with the inclusion of more tenants providing the convenient service. These new enhancements have allowed iShopChangi to improve site conversion, increase retention and boost customer satisfaction.

INNOVATIVE PARTNERSHIPS

On top of increasing reach and gaining mindshare through publicity and promotions in key markets such as China and Indonesia, strategic partnerships have enabled Changi Airport to grow its commercial revenue. In the last financial year, Changi Airport collaborated with China mobile payment partners Alipay, WeChat Pay and UnionPay to launch quarterly shopping promotions targeting Chinese

passengers. For the Indonesian market, Changi Airport continued to deepen existing collaborations with BCA and embarked on a new partnership with Bank Mandiri, strengthening its outreach to Indonesian travellers as a result.

Riding on the growing popularity of QR payment, Changi Airport teamed up with local mobile payment company Liquid Group to introduce an integrated payment platform that accepts multiple QR payment applications. With this, tenants in Changi Airport can process payments from both local e-wallets and international payment applications on a single first-of-its-kind platform. Besides a wider range of digital payment options available, passengers can now enjoy a more seamless way of going cashless.

As Changi Airport hunts for new ways to enhance the retail experience for passengers, the airport has also leveraged new technologies. CAG collaborated with DFS Singapore, Temasek Polytechnic and SoftBank Telecom Singapore to introduce Pepper, an interactive robot programmed to recommend a list of different wines based on passengers' responses to a short questionnaire. Stemming from on-ground surveys and observations, this innovation served a few purposes – enhancing the shopping experience, injecting a novelty factor and driving sales. Since the launch of the trial, an

average of 100 passengers a day interact with Pepper.

OPTIMISING SPACE FOR COMMERCIAL GROWTH

During the past year, the continuous journey to transform and elevate the experience of Commercially Important Person (CIP) passengers on the ground began with the completion of a brand new dnata lounge in T3, the Marhaba Lounge, and the completion of an expanded Qantas Business Class Lounge in T1. In the pipeline are some new-to-Changi CIP lounges such as the Qantas First Class Lounge and the Qatar Airways Premium Lounge, which are expected to be completed in the coming months. Changi's hub carrier, Singapore Airlines, also worked closely with CAG to kick-start the first phase of an exciting multi-year revamp of its CIP lounge offerings in T3.

In the departure check-in hall, ground handler SATS also rolled out a new check-in lounge for premier passengers in T3, and completed the revamp of its Premier Check-in Lounge in T2.

In CAC, following the successful implementation of a vending machines cluster at Cargo Agent Building (CAB) D, CAG introduced a similar cluster at CAB C to provide greater convenience and more food options for the cargo community. Named 'Chillax', it provides a comfortable chill-out zone for the bonding and networking of the cargo community at the CAC.



Left:

Two lucky shoppers beat 1.4 million other contestants in the annual flagship Be a Changi Millionaire retail promotion this year and emerge as the ultimate winners.



Piecing together a retail heaven jigsaw

Shopping and dining are integral elements of the Changi Experience. As the former Head of Planning and Leasing in the Airside Concessions Division, Mrs Chandra Mahtani was responsible for developing and leasing airside commercial spaces in all of Changi's terminals, and has played a significant role in transforming these spaces in the past decade. Changi is now widely acknowledged as one of the benchmark airports in the competitive and dynamic travel retail industry.

Staying ahead of the curve is no easy feat. One of the strategies adopted was having a long-term vision for Changi's retail business, including anchoring an iconic retail brand that could elevate Changi's stable of luxury brands. This took the form of a decade-long courtship with Louis Vuitton. Chandra considers securing LV's agreement to have its world's first airport duplex store in Changi as one of her most memorable achievements. She also played a pivotal role in cultivating partnerships with major travel retail players and brands from all over the world, cementing Changi's position as a leading airport in the industry.

Chandra also feels very privileged to have been involved in the commercial planning aspects of all major developmental projects. From the upgrading of T1 and T2, to the retail planning of three new terminals (the Budget Terminal, T3 and T4), Chandra is well-poised to take on the next challenge in her career – the commercial planning of T5. "The depth and breadth of T5 is unlike anything I've done before, which presents an exhilarating challenge," Chandra said with a smile.

Chandra Mahtani

Vice President,
Terminal 5 Commercial Planning

Being Operationally Prepared

RAISING SAFETY TO THE NEXT LEVEL

Behind the scenes of Changi Airport's terminals, workers in the airside bustle to and fro tirelessly, delivering in-flight meals, luggage and cargo to the planes like clockwork. They also ensure that each plane is cleaned, checked and refuelled before it takes off again from Changi. As passenger traffic at Changi continues to grow year-on-year, the airport implemented various initiatives to help staff improve productivity, so that operations can remain smooth and safe.



RECERTIFYING CHANGI AND SELETAR AERODROMES

The Air Navigation Order requires all civil aerodromes in Singapore to hold a valid aerodrome certificate. To enable the continued operations of Changi Airport and Seletar Airport, the five-year aerodrome certificates for both airports were successfully renewed before their expiry on 30 June 2019.

As part of the re-certification process, the CAAS Aerodrome & Air Navigation Service Regulation Division conducted four phases of comprehensive audits from July 2018 to February 2019. The audits ascertained that both Changi and Seletar aerodromes complied with regulatory requirements in all aspects. A total of 24 divisions, together with many internal

stakeholders, worked closely to ensure that the comprehensive audit was completed successfully.

PREPARING FOR EMERGENCIES

To enhance its emergency preparedness and rescue capabilities, CAG conducted two aircraft emergency exercise drills in the year. Based on scenarios of aircraft on fire, one simulated a sea crash, while the other a land crash. Both exercises were attended by more than 350 operational personnel, including senior management from CAG, the CAAS, the Ministry of Transport, the Republic of Singapore Air Force (RSAF) and airline partners.

Part of the drills included a crisis seminar, which was held on 6 March 2019. The seminar was to share key lessons learnt from

the exercise with all involved, as well as address key areas vital to an airport's emergency preparedness and business continuity. Industry experts were invited to share case studies and lessons learnt from the emergency management of aircraft and terminal incidents, helping to reinforce the Changi Airport community's response and resilience against security threats. More than 150 participants from the airline community, mutual aid agencies and airport partners attended the event.

To prepare for a wider range of threats, CAG also organised an inaugural crisis preparedness exercise focused on non-air crash scenarios. The exercise was aimed at enhancing the crisis preparedness of the airport community at Changi Airport. As security incidents are



Above:
CAG, state agencies and airport partners coming together for the inaugural crisis preparedness exercise on non-air crash scenarios.

Left:
A participant concentrates on manoeuvring in the new Forklift Operations segment of the Safe Airside Driving Competition.

complex and have a significant impact and consequence on airport operations, the exercise provided a platform for state agencies and airport partners to understand in depth the impact of a bomb blast to airport operations, and consolidate and align responses on an airport-wide scale following that. Such annual exercises are part of CAG's ongoing emergency preparedness efforts, which also include training and engagement sessions to equip its airport partners with the competency to manage such terminal-related incidents.

Besides soft skills, infrastructure is another important aspect of emergency preparedness. In anticipation of the start of operations at Runway 3, Fire Station 3 was commissioned on 1 November 2018. The new Fire

Station 3 includes a larger office than the existing fire stations, as well as new facilities which can interface with both CAAS air traffic control and the RSAF tower to manage fires and emergencies. A new Casualty Clearance Station 3 was also built to facilitate the casualty management operations for passenger loads of up to those of A380 aircraft, the largest aircraft to operate at Changi Airport.

INSTILLING SAFETY AWARENESS

A safe airport environment is the foundation for positive travel experiences for passengers. For maintaining its safety record, Changi Airport achieved a deficiency-free rating by the International Federation of Air Line Pilots' Associations (IFALPA) for the 37th consecutive year since 1981.

Recognising that a safe working environment is also paramount for the Changi airport community who make up the lifeforce of the airport, CAG established the Airport Safety Awards (ASA) to recognise commendable and outstanding safety acts and safety-related projects by members of the airport community. Since its introduction in 2016, the ASA has gone from strength to strength and is now deemed by CAAS and key airport partners as the highest platform to acknowledge safety contributions by staff at both Changi and Seletar airports.

At the second annual ASA ceremony held on 17 August 2018, more than 300 airport staff from various organisations based in the

two airports attended the event. It featured exhibitions showcasing safety innovation and improvement projects by various airport partners such as SATS, dnata, SIA Engineering Company (SIAEC) and ST Engineering Aerospace. To date, close to 70 individuals and more than 60 teams have been recognised for their exemplary safety acts.

To promote safe driving in the airside, another key component of airside safety, the third run of the Safe Airside Driving Competition was held in March 2019. In addition to tractor driving, the scope of the competition expanded to include two new competition segments – Joint Container Pallet Loader (JCPL) Docking and Forklift Operations. This helped to extend CAG's safety outreach and involve even more members of the airside community.

Designed to assess the participants on their knowledge and compliance to rules, as well as manoeuvring skills, competition circuits were set up to replicate their actual work environments. The well-received event saw more than 200 guests attending, with representation from all levels of staff from key airport partners. Since the introduction of this competition, safety performance has improved in the airside.

To improve situational awareness for airside drivers, the Runway Incursion Prevention Pre-warning Location Equipment (RIPPLE), a pre-warning system, was

introduced to alert drivers when they are approaching the vicinity of a runway. Implemented in July 2017 and enhanced in August 2018, the system is installed in all airside vehicles used for runway maintenance. Using the Global Positioning System to draw a geographic boundary, or geofence, 180 metres from the centre of the runway, RIPPLE automatically sends visual and audio alerts to the airside driver if his vehicle enters or exits the geofence.

IMPROVING AIRPORT SECURITY PROCESSES

To provide convenience to passengers, temporary storage of luggage during layovers is a commercial service available in Changi's terminals. Previously, bags needed to be manually searched prior to storage, which affected the passenger experience. Through discussions with regulators, CAG obtained approval for the use of an explosive trace detector (ETD) to screen luggage in temporary storage. Replacing manual searches, the ETD not only improves passenger experience, it also serves to improve security.

INCREASING PRODUCTIVITY THROUGH APRON WI-FI

Productivity at Changi Airport's aprons was boosted when CAG implemented an airport-wide apron Wi-fi infrastructure for the airside community, covering the contact stands, remote and cargo bays, as well as baggage sorting areas of the four terminals. Part of the Smart Apron initiative, apron

Wi-fi enables airport partners such as SATS, dnata and SIAEC to use their internet-connected devices for real-time baggage tracking, status reporting, asset tracking and accessing electronic service manuals. In addition to improving work efficiency and convenience, it also enables future innovations at the airside aimed at improving productivity, which in turn strengthens Changi as an air hub.

WIDENING AIRPORT BOULEVARD

As part of continuous efforts to plan ahead and provide ample airport sub-system capacity, a fifth vehicle lane was added to both the airport-bound and city-bound lanes of Airport Boulevard. This expansion is part of the airport infrastructure master plan that will enable Changi Airport to serve its planned 85 to 90 mppa with high levels of service.

EXPANDING THE SKYTRAIN FLEET

In February 2019, Changi Airport's Skytrain system saw its first train car smoothly crossing the one-million kilometre travel milestone. Six new train cars were also added to the existing fleet of 16 to provide more peak hour carrying capacity. This will facilitate smoother transfer of passengers within and between T1, T2 and T3.

Executed through seamless collaboration between the Engineering & Development and Airport Management Clusters, the new train cars were

successfully delivered over three nights during off-peak hours. Besides comprehensive testing and commissioning checks prior to launching the new train cars into service, system enhancement works were also carried out. These included an upgraded power supply system, new on-board surveillance and recording systems, as well as enlarged maintenance depot facilities. Innovative, first-of-its-kind fabric shutter doors were also installed along the Skytrain tracks where the train cars enter and exit the Jewel building, to minimise heat inflow every time a Skytrain passes through the complex. A pilot trial using smart sensors to enable predictive maintenance of the Skytrain sub-system is also being rolled out.

ENHANCING AIRSIDE STAFF WELFARE

To provide a more comfortable working environment for airside staff, RECHARGE, a common airside rest area was launched in T1 in May 2018. Staff now have a one-stop, rejuvenating environment to get some rest, interact with colleagues, as well as access more food options without having to go to the public areas of the terminals. Through offering amenities and cool respite from the outdoor environment, RECHARGE enhances the attractiveness of airside jobs.



Left: Workers concentrate on aligning the new train car to the tracks, to ensure successful delivery of the new batch of Skytrains.



Improving the lives of passengers

CAG staff like Au Lye Quee, Senior Manager with the Engineering Management and Systems Planning Team, are responsible for ensuring the operational readiness of Changi Airport's infrastructure at all times. This is integral to securing the airport's long-term competitiveness in a dynamic aviation industry.

One key piece of infrastructure in Changi is its Passenger Loading Bridges (PLB). In 2001, Lye Quee headed the project to replace 31 PLBs in T1 which were reaching their end-of-life. Adding to the complexity of the task, he had redesign the PLB system to allow two narrow body aircraft to be parked and docked at a single wide body aircraft stand in a live operating airport environment. Through careful planning and execution, Lye Quee and his team successfully completed the project on time.

Fast forward to 2015, Lye Quee was asked to join the airport's Skytrain team - to enhance the system's signalling system and add six new trains to the system in a project that coincided with the construction of Jewel.

As a portion of the Skytrain's track was located within Jewel, doors had to be installed at both ends of this track to keep air-conditioned air in. Lye Quee's team modified the train signalling software to open the doors automatically as trains approach Jewel, and close as they leave.

When asked about his experience, Lye Quee enthuses, "It's just like giving birth to a child – hard work but all worthwhile. You're glad that you achieved something which can improve the lives of passengers."

Au Lye Quee

Senior Manager

Engineering Management & Systems Planning

Building for the Future

INVESTING FOR GROWTH

JEWEL CHANGI AIRPORT
Changi Airport's newest game-changing development, Jewel, welcomed its first visitors during a week-long ticketed public preview on 11 April 2019. 500,000 tickets were made available, where visitors were greeted by views of the dazzling HSBC Rain Vortex, the world's tallest indoor waterfall, and the spectacular Shiseido Forest Valley, a four-storey lush indoor forest.

The 135,700-square-metre complex at the heart of Changi Airport is built on the site of the former T1 open air car park and houses over 280 retail and F&B outlets. Jewel offers various play attractions suitable for people of all ages, as well as airport and accommodation facilities – all within one of Singapore's largest and most majestic indoor gardens with more than 2,000 trees.

Together with the opening of Jewel, Changi's T1 has also been expanded to increase its capacity by three mppa. This brings Changi Airport's total passenger capacity to 85 mppa across all four terminals.

CHANGI EAST

Changi Airport's next major project – the massive Changi East development – is moving full steam ahead with key components achieving major milestones. As air travel in the Asia Pacific region continues to grow,



passenger traffic at Changi is expected to increase in tandem. The development will provide the additional capacity needed to enhance Singapore's air hub status.

BUILDING AHEAD WITH T5

T5 is the key part of the entire Changi East development and is estimated to add up to 50 mppa to Changi Airport's overall capacity when it opens in the early 2030s.

On 13 April 2018, CAG announced the appointment of the Master Building Consultants (MBC), comprising three teams, providing architectural design and engineering consultancy services

Above:
The 40-metre Rain Vortex, inspired by the frequent rains in Singapore, takes centre stage in Jewel.

Right:
Changi East spans 1,080 hectares and will add to Changi Airport's capacity over the long term.





for the development. The firms appointed are:

- ◆ KPF (Singapore) Pte Ltd, in partnership with Heatherwick Studio and Architects 61 Private Limited, for the provision of architectural design services;
- ◆ Arup Singapore Private Limited, Mott MacDonald Singapore Pte Limited, and Surbana Jurong Consultants Pte Ltd, for the provision of engineering services; and
- ◆ DP Architects Pte Ltd, for the provision of design services for commercial spaces.

CAG also announced the appointment of the Master Civil Consultants (MCC) for the T5-related landside and airfield works – Arup Singapore Private Limited, Mott MacDonald Singapore Pte Limited, Surbana Jurong Consultants Pte Ltd and Changi Airport Planners and Engineers Pte Ltd.

T5's concept design has been completed, and the project is now moving on to the schematic

design phase, which will take another few years to complete. The MBC and MCC teams will continue to work with all stakeholders to clarify requirements and to refine T5's design.

COMPLETION OF RUNWAY 3

The development of a three-runway system is necessary to ensure that Changi Airport has sufficient runway capacity to meet the anticipated growth in aircraft movements in the medium to long term.

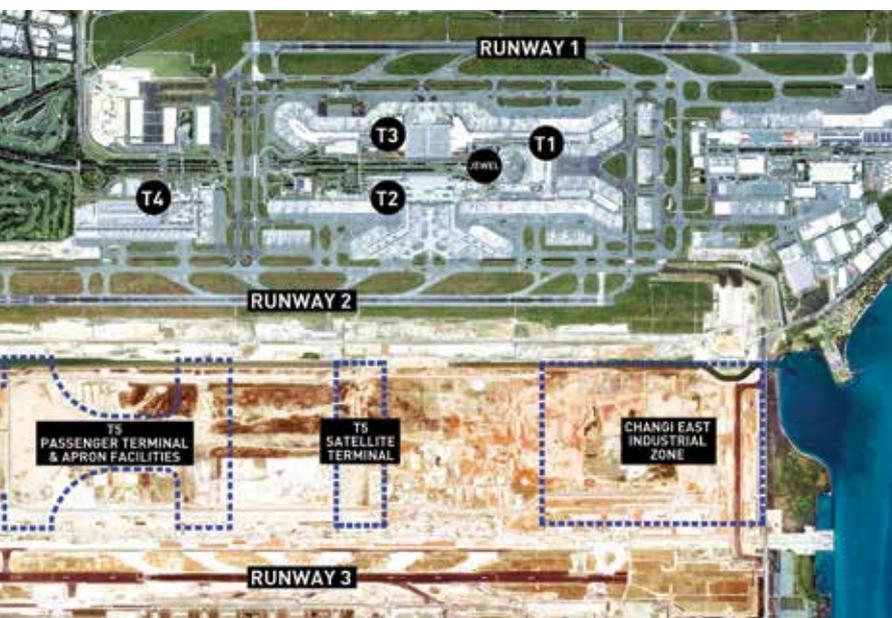
CAG has completed the strengthening of Runway 3 for future civil aviation use and extended it from 2.75 kilometres to 4.0 kilometres. The strengthening work involved paving the runway with four layers of materials, totalling 2.65m in depth, to allow it to withstand the pressure of heavier commercial aircraft landing on it at high speed. Similarly, the extension of the runway, which has to date only been used by military aircraft, is necessary to enable larger civil aircraft to use it for landings and take-offs.

The construction of supporting infrastructure such as drainage and ancillary buildings, like Fire Station 3 and Airfield Lighting Control Centres, has also been completed.

Military flights have resumed on Runway 3 and more than 40 kilometres of supporting taxiways are currently in development to connect Runway 3 to Runway 2, and to the rest of Changi Airport.

OPERATIONALISATION OF THE CHANGI EAST CHECKPOINT

As development works are expected to ramp up in the coming years, with more vehicles and workers entering the Changi East site daily, the Changi East Checkpoint began operations in September 2018. The checkpoint,



which took about a year to construct, serves as a centralised entry of all vehicles and personnel into the Changi East site. Besides allowing for easier tracking of all who enter the site, it also allows for the implementation of a standardised security process, while optimising manpower resource allocation.

There are six checkpoint lanes, designed to handle up to 500 vehicles and 8,000 personnel per hour. Individuals entering the site will have to be pre-registered and obtain passes to enter the worksite.

Managed by CAG, security and maintenance management personnel are on-site round-the-clock to run the checkpoint.

UTILISING NEW TECHNOLOGY TO ENHANCE SAFETY ON-SITE

To enhance safety on the site of the Changi East development which involves multiple large-scale construction works taking place at the same time, several innovative technologies have been implemented over the year.

Using the Online Work Declaration System, work team supervisors register their work areas, which are then displayed on an online, digital map of the Changi East site. Workers are also issued with a transponder, which will alert them if they enter into restricted areas.

Smart glasses are also used to provide real-time line of sight footage by ground inspectors and streamed to the Changi East



Command Centre so that duty managers can accurately see what is happening on ground. As specific parts of the airfield have height restrictions to ensure aircraft safety, the Automatic Height Infringement Detection System was also introduced, where sensors and GPS locators are placed on equipment to detect when the equipment has exceeded an area's height limit.

LAUNCH OF SELETAR AIRPORT'S NEW TERMINAL

After two years of construction, Seletar Airport's new passenger terminal was completed and started operations on 19 November 2018. Spanning 10,000 square metres, the new two-storey terminal can handle 700,000 passenger movements a year and is designed to accommodate both scheduled and non-scheduled flight services.

Compared to the old terminal which only had one check-in counter, one security lane and an immigration area, the new terminal features larger operational areas for passenger facilitation, including a departure and arrival hall, arrival immigration and baggage claim areas.



Above:
The Changi East Checkpoint, which has six checkpoint lanes, started operations in September 2018.

Below:
To enhance safety on the site, smart glasses were used for the first time to provide better real-time footage to the Changi East Command Centre.

On the airside, three new aircraft parking stands positioned directly in front of the building allow for quick boarding and disembarkation of passengers, enabling faster turnaround time for scheduled operations. For private jet operators, the new Seletar Business Aviation Centre housed within the same facility provides business aviation passengers with dedicated and exclusive passenger clearance and facilitation, in a relaxed lounge setting.

In the lead-up to the commencement of operations, extensive trials involving over 2,000 participants were conducted from June 2018. Through this process, systems and procedures were tested and fine-tuned to ensure readiness for live operations.

Since November 2018, all operations have commenced at the new facility.

On 21 April 2019, Seletar Airport welcomed the inaugural flight by Firefly, FY3126, from Subang, Malaysia to Seletar. This marked a successful start for Seletar's scheduled flight operations.



A Jewel in Singaporeans' hearts

Marque events and unique attractions such as the “Changi Airport Race” and the first three-storey slide in an airport help to increase footfall and support the commercial viability of the airport’s retail business. Passenger spend on shopping and dining also go towards offsetting aeronautical charges at Changi.

As the former Head of Airport Operations for T2 and T3, and later the Head of Landside Concessions, Jean played a major role in organising flagship events and spearheading the rejuvenation of landside retail experiences in T3. These experiences were helpful in giving Jean valuable insights for her subsequent role in Jewel.

What started out as expansion plans for T1’s car park evolved into the construction of an entire complex. Her team realised they should optimise the use of space and create something that will add to Changi’s global appeal.

After getting government agencies’ approval, Jean and the team set out to make Jewel a reality. After nine years and literally scouring of the world in search of experts and one-of-its kind attractions to put Jewel on the world map — the complex opened its doors in April 2019.

Jean believes Jewel will contribute positively to how passengers perceive Changi. “We hope Jewel will bring people to Singapore, connect lives, and make Singapore proud. Everyone on the team endeavoured to achieve that. We knew Changi Airport already holds a special place in Singaporeans’ hearts and we wanted to honour that.”

Hung Jean

Chief Executive Officer,
Jewel Changi Airport Development Pte Ltd

Creating International Impact

ENLIVENING AIRPORTS, CREATING POSSIBILITIES

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CHANGI AIRPORT GROUP

Changi Airports International (CAI), a fully-owned subsidiary of CAG, continues to develop its investments and share its expertise with airports around the world. Its portfolio includes assets in Brazil, India, Japan, Russia, the Philippines and consultancy projects in Africa, Canada, China and Southeast Asia.

BRAZIL

Tom Jobim International Airport in Rio de Janeiro, Brazil, continued to deliver resilient operational and financial performance in FY2018/19 amidst a challenging external environment. The airport witnessed growth across all international sectors, particularly Europe, which grew 9.4% in the last year. The international gateway to the 'Marvellous City' welcomed 4.6 million international passengers. Domestic passenger traffic at the airport declined 16% from the previous year due to the sudden bankruptcy of the country's third largest domestic carrier, Avianca Brasil, and weak economic situation, particularly in the state of Rio de Janeiro.

Total revenue in FY2018/19 grew 7% year-on-year despite lower domestic traffic. Revenue from cargo operations grew 59% year-on-year, driven by imports in several key sectors including oil and gas, aircraft engines and components, machinery and pharmaceutical products.



As of FY2018/19, Tom Jobim International cornered 90% of the market for imported goods bound for the state of Rio de Janeiro, as compared to 67% in 2013, before privatisation.

As the airport sought to enhance its vibrancy and improve the passenger experience, passengers enjoyed a wider selection of dining and retail options. Some 23 new outlets, including TGI Fridays and WH Smith, were added in 2018.

Tom Jobim International received honourable mention at the annual Airports Going Green Awards for the "Conexão Escola" project. The project was launched in 2015 with the aim of bringing the airport closer to the community located in the surroundings of the airport. The goal of the project was to educate children on





Above:
Fukuoka Airport is CAI's first investment in Japan.

Left:
Chongqing Jiangbei International Airport's newest terminal features unique storefronts that draw inspiration from the city's distinctive heritage.

Below:
New product categories and brands that appeal to travellers were introduced in Chongqing Jiangbei International Airport.



environmental issues and empower them to propagate sustainable practices wherever they live.

Building upon successes in operational excellence, the airport was named the sixth Best Airport in South America by Skytrax in 2019.

Despite the near-term challenges due to Brazil's subdued economic recovery, Tom Jobim International is expected to benefit from the country's long-term economic outlook.

CAI has a 51% shareholding in the concessionaire, while government agency Infraero owns 49%.

CHINA

In November 2018, CAI joined hands with Chongqing Airport Group to set up Sino-Singapore Chongqing Airport Commercial Management Co., Ltd.

The company focuses on enhancing Chongqing Jiangbei International Airport's non-aeronautical business by introducing innovative elements, experiential concepts and new product mix that appeal to travellers and visitors. The company also manages advertising sales in the terminals, the CIP (Commercially Important Persons) and car park facilities, and the ground transport centre.

The joint effort resulted in the newest terminal, Terminal 3A,

featuring unique storefronts that drew inspiration from the city's distinctive heritage and created a strong sense of place. To further showcase the city's rich culture, well-known local food specialty stores such as Wu Chao Shou (featuring dumplings) and Chen Chang Yin (retailing fried bread) were introduced. Complementing these were leading international brands such as Coach, Shanghai Tang and Tumi.

The airport is the ninth busiest in the country and welcomed 41 million passengers in 2018. It clinched several Best Airport awards at ACI's ASQ Awards 2018.

CAI holds a 49% stake in the joint venture. Besides Chongqing, CAI provided consultancy services to other Chinese airports in commercial development, operational efficiency and professional training. These include airports in Changsha, Qingdao and Shenzhen.

INDIA

Durgapur Aerotropolis is India's first privately managed airport city.

Flight operations have been growing at the airport city's Kazi Nazrul Islam Airport. Air India currently operates a four-weekly direct service between Delhi and Durgapur and three-weekly services between Hyderabad and Durgapur.

In June, SpiceJet launched one daily flight connecting Durgapur to Mumbai and Delhi. With these connections, Kazi Nazrul Islam Airport in Durgapur airport city has direct air linkage to three of India's largest metro cities.

The aerotropolis is developed by Bengal Aerotropolis Projects Limited (BAPL), in which CAI has a 30.2% stake. The other major shareholder is the state-owned West Bengal Industrial Development Corporation, with a 26% stake.

JAPAN

In August 2018, CAI and its partners won the contract to operate, manage and develop Fukuoka Airport in Japan for a period of 30 years. Fukuoka Airport is CAI's first investment in Japan.

The consortium, through its operating company, Fukuoka International Airport Co. (FIAC), took over airport operations on 1 April 2019. Fukuoka Airport will be positioned as the gateway to Western Japan and the airport of choice for traveller and airlines.

Through work done in collaboration with CAI's partners, Fukuoka Airport won the Highly Commended Award in the more than 20 mppa category at the Routes Asia Marketing Awards 2019.

Over the next 30 years, FIAC will expand the airport's network to welcome 35 million passengers with connections to 100 domestic and international points. It will introduce simplified landing fee structures and long-term discounts to attract airlines and secure flight routes.

FIAC will be introducing a brand new entertainment and commercial concept at the airport. Travellers will constantly be surprised with ways to have fun through a wider selection of F&B

outlets and retail options, as well as on-site entertainment.

It will also take steps to ensure that the airport provides passengers with a better travelling experience by introducing speedier check-in and security clearance services.

FIAC will continue to work with local businesses to stimulate economic development in the immediate surroundings, and across Kyushu and the rest of Western Japan.

The other partners in the consortium are Fukuoka Airport Holdings, Nishi-Nippon Railroad, Mitsubishi Corporation and Kyushu Electric Power.

THE PHILIPPINES

CAI and its partners won the 25-year concession to operate and maintain Clark International Airport in the Philippines in December 2018. The airport,

strategically situated less than 100 kilometres northwest of Manila, will be developed into a premier gateway linking North and Central Luzon to the rest of the world.

The consortium, through the operating company, Luzon International Premiere Airport Development Corp. (LIPADC), will engage airlines and tourism authorities to increase air links and further boost the double-digit passenger traffic growth experienced by the airport over the last few years. It will also introduce more hassle-free processes and amenities to transform the passenger experience.

The consortium will also manage the cargo, general aviation and logistic facilities of the airport.

A new 110,000-square-metre passenger terminal is under construction. Targeted to open in 2021, it will almost double the





Left:
Plans are underway for a new passenger terminal at Krasnodar International Airport.

airport's capacity to eight million passengers per annum.

LIPAD took over operations in August 2019. CAI holds a 15% stake in the operating company.

RUSSIA

Krasnodar

CAI invested in a group of airports in Russia's Krasnodar region in 2012. Since then, the airports – Anapa, Krasnodar and Sochi – have witnessed a two and a half times expansion in passenger traffic.

Over the year, CAI worked with its partners to attract airlines, open new city links, and increase flight frequencies. Passenger traffic climbed 12% year-on-year to 12.4 million passengers in FY2018/19. International travel registered strong growth, particularly at Sochi and Krasnodar airports, driven by markets such as Armenia, Georgia, Israel, Turkey

and Uzbekistan. All three airports saw steady growth in the domestic market, propelled by enhanced capacity to Moscow and other regional destinations.

In June 2018, Sochi International Airport welcomed athletes and fans of FIFA World Cup 2018. Over a period of three weeks, the airport processed more than 5,000 flights, 660,000 passengers and 5,500 tonnes of baggage. The airport successfully handled a record 37,000 passengers a day, more than double the daily average.

In the year, the airports upped their game in commercial offerings. At Sochi International, the landside commercial area was renewed and duty paid store reconfigured to offer a better retail and F&B experience.

At Krasnodar International Airport, new global F&B brands were introduced to the exterior area of the airport for an enhanced experience for passengers, well-wishers and the greater airport community.

Anapa Airport continued to outperform sales and revenue targets as a result of the best in class commercial programme that included the introduction of a new product mix and services, in the new terminal.

Plans are also underway for a new passenger terminal at Krasnodar Airport, which will have more than double the capacity of the current terminal.

The airports once again won top accolades on international and national platforms. At the ACI ASQ Awards 2018, Sochi International retained the Best Airport (5-15 mppa, Europe) title for the second consecutive year, after having won the same award in the 2-5 mppa category previously. For the second time, Sochi was named Best Regional Airport at the Business

Traveller Russia and CIS Award 2018. On the national level, Sochi and Anapa Airports maintained their Best Airport awards in their respective traffic categories at Russia's National Aviation Infrastructure Show 2019.

CAI has a 30% stake in the joint venture, which owns the airports and their management company, Basel Aero.

Vladivostok

Vladivostok International Airport in Russia's Far East continued on its trajectory of strong traffic growth, increasing 22% year-on-year to reach almost 2.8 million passengers in FY2018/19.

CAI worked with the airport team to launch targeted incentive programmes and marketing campaigns for airlines and tourism authorities to draw traffic. The airport introduced new carriers and increased flight frequencies within Russia and to destinations such as China, Japan and South Korea.

The commercial area was transformed, with a reconfigured mezzanine that offered more retail and F&B options. Plans to revamp the duty-free area and expand the domestic business lounge for greater passenger comfort are on track.

The airport held a series of workshops and training sessions to uplift service standards and enhance the passenger experience.

In the year, the airport was named Best Economic Project for Regional Development, and won second place for Best International Airport (up to 4 mppa) for the second consecutive year at Russia's National Aviation Infrastructure Show 2019.

CAI holds a one-third stake in the joint venture that owns and manages the airport.

Attracting The Best Talents

EMPOWERING TALENTS TO DEVELOP AND SHINE

a strong people-oriented culture, know internally as “Terminal H” (with H for Heartware).

At the Randstad Employer Brand Awards 2018, CAG reclaimed the top spot after its last win in 2016. According to the 2018 survey, the top three employer value proposition drivers for CAG are – financially healthy, good reputation and adoption of latest technologies. A good 69% of survey respondents who are aware of CAG want to work for the organisation.

The HR Excellence Awards 2018 recognised the most exceptional initiatives across strategic Human Resource (HR) functions to promote and celebrate excellence in HR practices and leadership. CAG took home the coveted gold awards for Employer of the Year as well as Excellence in Workplace Culture – recognising the organisation’s efforts in building a collaborative, open and innovative workplace culture.

PEOPLE EXPERIENCE AND ENGAGEMENT

Being in a business that focuses on passenger experience first, CAG constantly looks at the innovative use of technology to enhance the travel experience. Similarly, CAG recognises the importance of promoting innovation as part of its organisational culture – to empower employees to push boundaries and develop new ideas.



FY2018/19 was a shiny year on the employer branding front for CAG as it clinched a hat-trick of awards – the Most Attractive Employer by Randstad, and the Employer of the Year (Gold) and Excellence in Workplace Culture (Gold) at the HR Excellence Awards. These awards are a testament to the organisation’s efforts on building



Above: Keynote presentations, workshops and experiential activities enriched CAG staff during the Learning Festival 2018.

Left: CAG is named the Most Attractive Employer at the Randstad Employer Brand Awards 2018.

Right: Newly renovated office featuring a cosy and chic-looking pantry area.



Through employee engagement programmes and activities such as the Learning Festival (LearnFest), employees were given the unique opportunity to be equipped with new knowledge to innovate. The theme of 2018's LearnFest was "Dream It, Test It", with the aim to build a spirit of experimentation among employees. The week-long event included power-packed presentations, workshops and experiential activities. For example, a customised Escape Room was built right within the CAG office to encourage employees to think out of the box and escape! Through the keynote sessions, they also had the privilege to hear from 19 speakers, both from CAG as well as renowned brands such as Ya Kun International, Google, DHL, SGAG, ShopBack and more.

To promote sharing in CAG, two learning initiatives were also organised by the Corporate and Information Technology (CIT) Division to promote digital innovation. 'AI Gets Real' was a one-day seminar and workshop that allowed employees to try their hands at Open Source and Robotic Process Automation Programming. The 'Sensors, Uncensored' workshop focussed on internal project sharing and live demonstrations with the objective to help employees generate new ideas in their areas of work.

Across the three events, there were a total of 550 participants, a 22% increase in attendees from the previous LearnFest.

ENHANCING INTERNAL COMMUNICATIONS

Another aspect of CAG's employee engagement efforts was the continued growth and use of In.Touch, CAG's internal social networking app, as well as a revamp of CAG's corporate intranet. Managed by CAG's Internal Communications team, the In.Touch app is used to crowdsource for ideas, keep staff informed of CAG's news and announcements, as well as to showcase the work of the various divisions and staff in CAG.

The app also saw new enhancements made to its features, such as the addition of office maps and questions commonly asked by staff. These enhancements provided staff with easier access to company-related information, and made the app even more useful for them. Through these initiatives, an average of 71% of staff logged in to the app at least once in FY2018/19, a 4% increase over the previous year.

CAG's corporate intranet also went through a revamp to improve its information architecture and user experience. The improvements

made helped employees locate information on the intranet more easily to enhance productivity at work.

WORKPLACE ENHANCEMENTS

Terminal 'H' remained at the core of CAG's people strategy. To build a collaborative and open culture within the organisation and among employees, CAG continued to work on the 'CAG HOME' project – a workplace transformation initiative. An office is no longer just a place where employees go to work. It has become an important strategy for organisations to attract and retain talent. Following the refreshed work spaces and environment in CAG's offices in T2, the Airside Operations Division's office also transformed from a traditional office space to one that facilitates collaboration and innovation, while creating capacity to support the company's growth sustainably. Employees moved into their new home in December 2018, where they were met with a larger, more comfortable communal pantry, more meeting rooms, and even a rest pod that supports the needs of shift workers in the airside office.

On top of the physical transformation of the CAG workplace, CIT rolled out corporate initiatives such as the Office 365 Productivity Suite and Staff Wi-Fi to enhance staff productivity and mobility. With the new Office 365, the cloud-based solution made finding and retrieving information more convenient for employees. It also allowed employees to work anytime and anywhere on approved devices. For example, the OneDrive platform enabled file-sharing with internal and external stakeholders, and also acts as a personal backup data storage drive. The roll out of Wi-Fi for staff usage across the terminals allowed employees to use their mobile devices in the offices while in a safe and secure office network.



Contributing to Communities

DOING THE RIGHT THING AND DOING THINGS RIGHT

Since 2012, Changi Foundation, the philanthropic arm of CAG, has focussed its community efforts on programmes for disadvantaged youths. Guided by its vision of 'Connecting with youths today, Empowering them for a better tomorrow', Changi Foundation offers opportunities for youths to grow into positive young adults, leading independent and meaningful lives.

Besides funding book prizes, education awards, and youth-focussed programmes, Changi

Foundation also works directly with its two main beneficiaries, NorthLight School (NLS) and Metta School, to co-develop meaningful programmes for students that also complement the schools' curricula in growing the students' work-readiness. With this, Changi Foundation has focussed its efforts on the development of programmes that provide job exposure opportunities. Learning is further enriched with the support and involvement of CAG volunteers who mentor and befriend the students, and airport partners who provide hands-on experiences.

In July 2018, Changi Foundation revamped its long-running Youth Passport Programme to provide Year 2 NLS students with deeper insights of the different vocational programmes their school has to offer, to facilitate better career-related decisions when they reach Year 3. With the aid of airport partners like The Cocoa Trees and Swensen's, more than 140 students got a taste of retail and F&B operations through specially planned hands-on programmes. They also learnt about potential career paths in sectors unique to Changi Airport, in companies like Certis Aviation Security and CAG's Airport Emergency Service.





Left:
The annual five-day Job Attachment Programme offers Year 3 NorthLight School students an experience of working life.

Close to 120 NLS students also took part in Changi Foundation's five-day Job Attachment Programme in October 2018. This is a 65% increase from the previous year, following NLS's request that CAG expand the programme. Students shadowed CAG staff from the Engineering, Airport Operations and People Team clusters, and airport partners from the engineering, retail, hospitality, and food and beverage sectors, helping to develop their skills for the workplace.

Another enhancement to the Job Attachment Programme in 2018 was the addition of a mentor-mentee meetup a week before the start of the programme. This gave volunteer mentors from CAG the opportunity to connect with their NLS mentees and to establish achievable goals with them.

In July 2018, Changi Foundation worked with airport partners Nando's and Swensen's to provide

seven Metta School students with a two-week job trial. The job trial presented the students, who were being trained for future employment, with learning experiences in a real-world setting. With guidance from the respective restaurants' staff, the students were able to further develop basic competencies needed for work in an F&B environment, like greeting customers, setting tables, and area cleaning.

Changi Foundation also worked with Metta School to bring the school's Social Competence Learning Programme to the airport. The programme focusses on helping students develop the basic skills needed for them to lead lives of greater independence. With the support of partners like NTUC FairPrice and Kopitiam, the 23 participating students got to practise purchasing groceries and meals, under the guidance of CAG volunteers.

In recognition of its volunteerism programme, CAG was one of four organisations in Singapore conferred the Volunteer Partner Award by Community Chest in October 2018. CAG was also conferred the Champion of Good status by the National Volunteer & Philanthropy Centre in November 2018, for a second year running. The Champion of Good status recognises organisations that have been exemplary in their corporate giving efforts, and have been influencers and multipliers by engaging partners and stakeholders on a collaborative giving journey.

SUSTAINABILITY

CAG believes that every employee plays an important role in sustainable development, and the sustainability ethos is integrated across all levels of the organisation. To that end, CAG launched its inaugural Sustainability Report in January 2019, undertaking the process of identifying, prioritising and validating the sustainability matters that are important to the company.

The Sustainability Report, which is aligned with Global Reporting Initiative guidelines, outlines CAG's priorities across six strategic thrusts, namely Fulfilling Careers, Safeguarding Lives, Invigorating Travels, Enriching Communities, Thriving Economy and Flourishing Planet.

CAG has also identified five United Nations Sustainable Development Goals (SDGs) as its key priority and impact areas, and an additional nine SDGs as high priority and impact areas. A Sustainability Working Group has been established to drive the organisation in achieving these goals.

On the environmental front, CAG has long-term targets which are aligned with Singapore's Climate Action commitments. The organisation has committed to reduce its carbon emissions intensity by 20% by FY2029/30, based on FY2017/18 levels. This is consistent with Singapore's commitments to reduce emissions intensity by 2030.

Since 2015, CAG has implemented a network of 11 food waste digestors across all four passenger & terminals. To date, this has enabled over 300 tonnes of food waste to be broken down into wastewater, and thus diverted from incineration. In alignment with Singapore's Zero Waste efforts, CAG aims to increase its waste recycling rate to 8.5% by FY2019/20.



Opposite Page, From Left:
A Swensen's supervisor works with a Metta School student on the basics of F&B services during the job trial organised by Changi Foundation.

Changi Foundation's partner Certis Aviation Security gives NorthLight School students an introduction to security operations in Changi under the Youth Passport Programme.

Engaging Fans Worldwide

KEEPING OUR FINGER ON THE PULSE



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CHANGI AIRPORT GROUP

As millions of travellers continue to depend on Changi as their airport of choice, social media is an integral channel for the airport to maintain a direct relationship with them.

Changi Airport has continued to build bonds with its fans and followers online. Its engaging efforts on social media platforms such as Facebook, Instagram, LinkedIn, Twitter, WeChat, Weibo and YouTube have contributed to the growth in affinity for the airport, inspiring travel among travellers from around the globe.

Changi Airport's Facebook page added another million likes, hitting more than three million fans, while Changi's Instagram channel crossed the 200,000-follower milestone. The two channels have been rated the most engaging pages for an airport around the world.

CAG maintains a pulse on what is trending on social media, and snagged a hit, riding on Nas Daily's first arrival into Singapore. With no sponsorship involved, CAG scored the opportunity to host the global influencer on a comprehensive airport tour that resulted in his viral

one-minute video showcasing the Changi Experience. The video was viewed more than 15 million times (3 million within the first 24 hours).

Changi's social media campaigns and engagement activities also clinched for the airport four awards.

SOCIAL MEDIA CHANNELS STATISTICS

Facebook

 **3,795,225**
FOLLOWERS +51%

Twitter

 **97,045**
FOLLOWERS +32%

Instagram

 **244,933**
FOLLOWERS +58%



Right: Launched on Valentine's Day, 'The Changi Trolley' short film tells of how two trolleys, Bob and Tracy, find love in the airport.

INDUSTRY AWARDS



Best Digital and Social Media Offer

DFNI-Frontier Asia Pacific Awards 2019



Best KOL-led Campaign

Moodies 2019 (#BelanjaDiChangi)



Best Client-Initiated Idea (Silver)

Hall of Fame 2018 (Nas Daily at Changi Airport)



Best Real-time Response Campaign (Silver)

Hall of Fame 2018 (Nas Daily at Changi Airport)

Left:

Mini video series 'Love at First Flight' centres around the romance of two young aspiring individuals who work at Changi Airport, where millions of hellos and goodbyes are exchanged every day.

Below:

Keeping a pulse on online buzz, the social media team scores an opportunity to host Nas Daily at Changi and converts him into an instant fan.



LAUNCHING JEWEL TO THE WORLD

CAG could not miss showcasing the most anticipated event of the year - the launch of Jewel Changi Airport. The team developed unique and exclusive social content to introduce the wondrous experience of Jewel, its retail and dining outlets, airport facilities and play attractions. CAG generated buzz by creating teasers around the key development milestones of the integrated complex, and drove fans to sign up for the public preview so as to be among the first to catch a sneak peek of the airport's newest glittering gem.

CAG also encouraged visitors and fans to share their experiences at Jewel using the hashtag #JewelThroughMyEyes. This initiative led to more than 11,000 user-generated content shared across multiple social media platforms.



To round it off, a fly-through drone video was also produced to launch Jewel's public opening. The video garnered close to 700,000 views and reached 1.6 million people around the world.

VISUAL STORYTELLING

Through its beautifully curated mix of airport, aircraft and destination imagery, CAG produced a slew of video content over the year that delivered a visual narrative of the Changi Experience to strengthen engagement and connection with its followers.

During the year, a three-part video series aptly titled "Love at First Flight" was launched. This was the story about two Changi Youth Ambassadors who fell in love with each other while working together at the airport. The videos resonated well with the fans of Changi Airport, and became one of the top 40 videos trending on YouTube in Singapore.

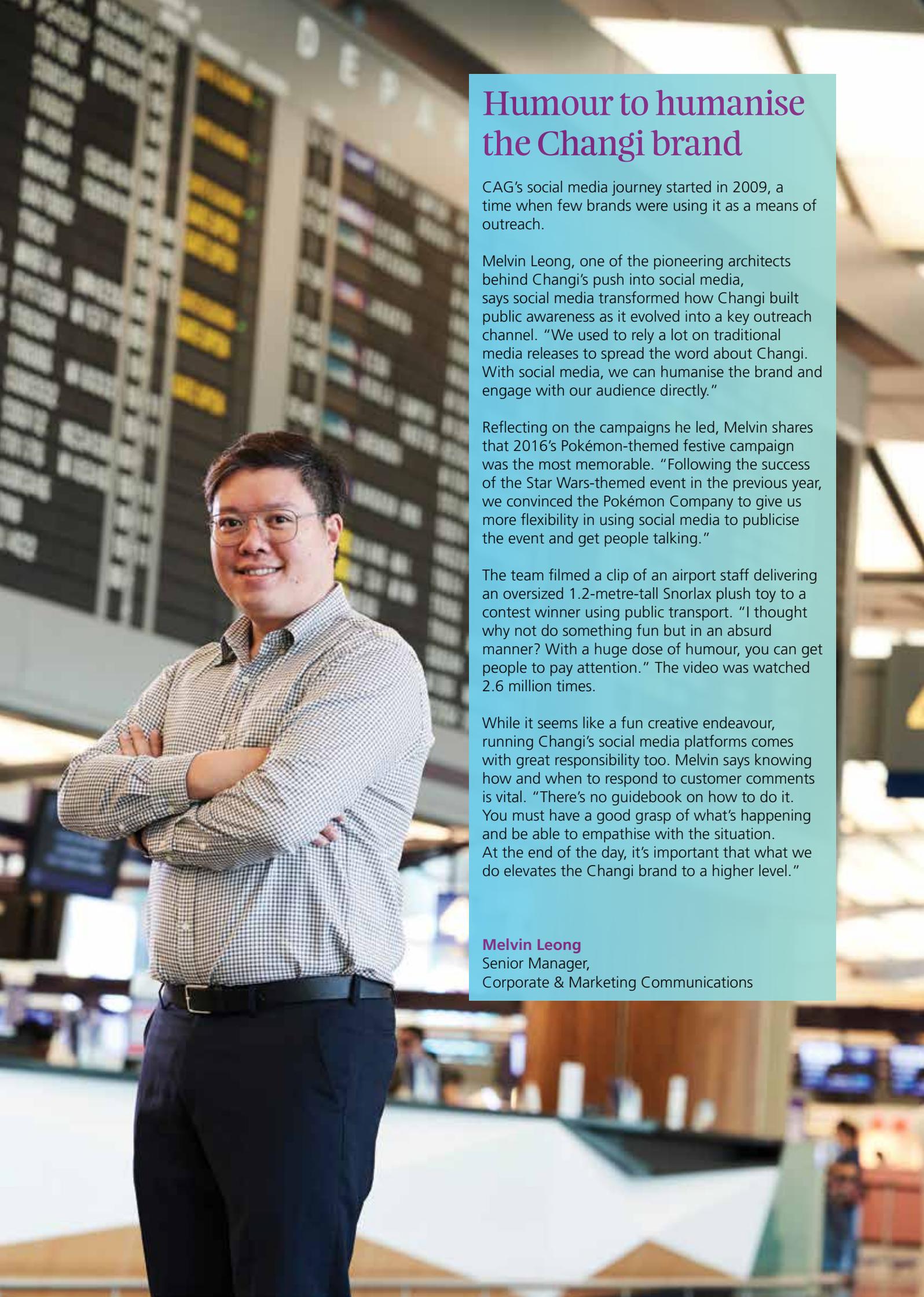
Another heartwarming short film was launched on Valentine's Day, focussing on the most underrated service offered to passengers – the airport trolleys. Making the inanimate come to life, a love story was crafted around Changi's landside and airside trolleys, showing their adventure within the airport as they pursued their dreams. The video and actual trolleys used in the production are now exhibited at the Changi Experience Studio in Jewel.

SWIFT AUTOMATED SOCIAL CUSTOMER CARE

Air travel can be daunting. More travellers and visitors on social media now require swifter responses to their feedback. CAG leveraged on artificial intelligence and automation to develop its first virtual assistant, MAX.

Powered by IBM Watson, MAX offers round-the-clock, on-demand assistance to general enquiries and helps passengers navigate their way around three most commonly requested functions, namely flight information and alerts, things to do around Changi, and reporting of lost items. For more complex feedback, passengers may be directed to speak to a Live Agent.

MAX is available on Facebook Messenger, Changi Airport's website, as well as the iChangi app.



Humour to humanise the Changi brand

CAG's social media journey started in 2009, a time when few brands were using it as a means of outreach.

Melvin Leong, one of the pioneering architects behind Changi's push into social media, says social media transformed how Changi built public awareness as it evolved into a key outreach channel. "We used to rely a lot on traditional media releases to spread the word about Changi. With social media, we can humanise the brand and engage with our audience directly."

Reflecting on the campaigns he led, Melvin shares that 2016's Pokémon-themed festive campaign was the most memorable. "Following the success of the Star Wars-themed event in the previous year, we convinced the Pokémon Company to give us more flexibility in using social media to publicise the event and get people talking."

The team filmed a clip of an airport staff delivering an oversized 1.2-metre-tall Snorlax plush toy to a contest winner using public transport. "I thought why not do something fun but in an absurd manner? With a huge dose of humour, you can get people to pay attention." The video was watched 2.6 million times.

While it seems like a fun creative endeavour, running Changi's social media platforms comes with great responsibility too. Melvin says knowing how and when to respond to customer comments is vital. "There's no guidebook on how to do it. You must have a good grasp of what's happening and be able to empathise with the situation. At the end of the day, it's important that what we do elevates the Changi brand to a higher level."

Melvin Leong

Senior Manager,
Corporate & Marketing Communications