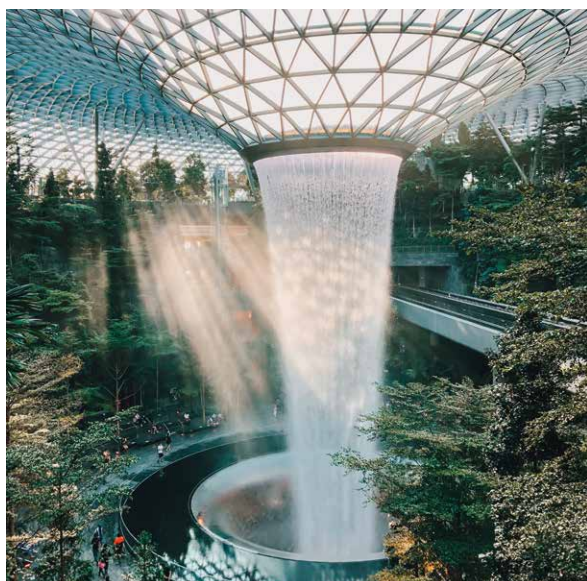
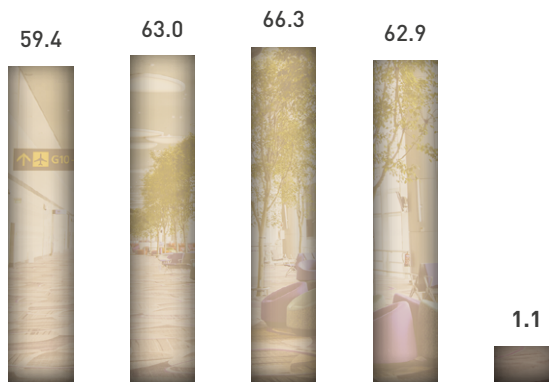


Business & Operations Review





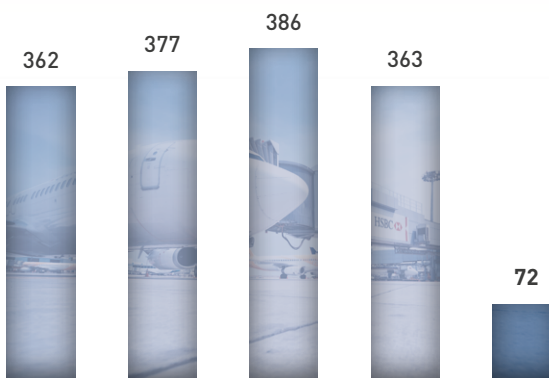
Air Traffic Statistics



1.1M
Passenger
Movements

IN MILLIONS

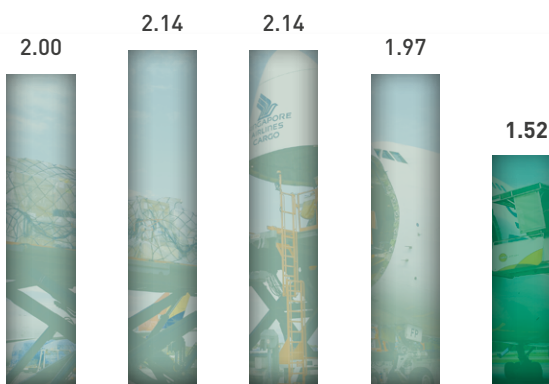
FY2016/17 FY2017/18 FY2018/19 FY2019/20 FY2020/21



71,840
Commercial
Aircraft
Movements

IN THOUSANDS

FY2016/17 FY2017/18 FY2018/19 FY2019/20 FY2020/21



1.52M
Airfreight
Throughput
(tonnes of airfreight)

IN MILLIONS

FY2016/17 FY2017/18 FY2018/19 FY2019/20 FY2020/21

Maintaining Singapore's Connectivity to the World

When Singapore made the unprecedented move to close its borders to short-term visitors and tourists in March 2020 to stem the import of Covid-19, Changi Airport's passenger traffic inevitably saw a drastic decline to the lowest level in its history. Without a domestic market, passenger movements plunged 98% year-on-year to 1.1 million in financial year 2020/21. April and May 2020 were the worst-hit months, with passenger traffic at just 0.5% of pre-Covid levels. For the year, aircraft movements declined 80% year-on-year.

Despite the dire air traffic situation, CAG was determined to rise above the challenge of protecting Singapore's vital air hub status. It worked closely with the Singapore government and its airline partners to maintain Singapore's connection to the world. To continue its critical role in supporting global supply chains and ensuring that supplies to Singapore remain uninterrupted, CAG encouraged airlines to increase freighter flights to Singapore to make up for the loss of bellyhold cargo capacity from passenger flights. As a result, Changi Airport witnessed healthy recovery in air cargo throughput,

which was down by only 23% for the year compared to the previous year.

Preserving Changi's air hub status

As one of Asia's largest air hubs, transfer and transit passengers are important segments for Changi Airport. When transfer and transit operations for selected routes were approved by the government for resumption in June 2020, CAG swiftly set up dedicated Transit Holding Areas (THAs) in its terminals and adopted new procedures to serve passengers arriving on such flights. These passengers were directly escorted to the THAs, and access to the area was restricted to them and authorised airport staff only. Strict protocols such as mask-wearing and temperature-taking at the entrances were observed. The THAs were also cleaned and disinfected regularly. A range of amenities was made available to passengers within the THAs to ensure comfort, while they waited for their connecting flights.

Since September 2020, CAG also facilitated holders of the Air Travel Pass, which allowed foreigners who were short-term visitors

departing from low-risk places to seek entry into Singapore. CAG further assisted passengers who were on short-term essential business and official travel from countries with which Singapore has Reciprocal Green Lane agreements. These arrangements were subject to change according to the evolving Covid-19 situation.

CAG also prepared for the handling of flights under the Singapore government's air travel bubble (ATB) arrangements with cities where the Covid-19 situation was deemed to be under control. Efforts were made to launch Hong Kong as the first travel destination via such an arrangement, which allowed for quarantine-free travel with no restriction on itinerary or purpose of travel. However, this had to be deferred due to a rise in the number of cases in Hong Kong shortly before the inaugural ATB flights were scheduled to take place on 22 November 2020. The deferment reflected the volatile situation and challenges posed by the pandemic to short-term travel recovery. Nonetheless, CAG stayed nimble and readily adapted to the changing circumstance while looking towards the prospect of resuming its Hong Kong ATB plan in 2021.



To facilitate transfer and transit passengers, dedicated Transit Holding Areas with amenities were swiftly set up in June 2020.



Maintaining Singapore's Connectivity to the World



Members of CAG's management team witnessed the arrival of the first batch of Covid-19 vaccines at Changi.

Strengthening cargo network and capabilities

Global travel restrictions and lockdown measures led to a shortage of air cargo capacity and lower economic activities in the initial months. However, Changi Airport's air trades remained resilient and handled over 1.5 million tonnes of cargo in 2020/21.

CAG worked with the government to set clear guidelines on cargo conveyance on passenger aircraft. Between April 2020 to March 2021, over 60 passenger airlines operated cargo-only passenger flights from Changi to over 90 destinations. By March 2021, more than 940 weekly cargo flights (including passenger freighters) connected Changi to over 80 cities.

During the year, Changi Airport welcomed four new freighter airlines with scheduled operations – Kalitta Air and Sichuan Airlines in April 2020, YTO Cargo Airlines in November 2020,

and SpiceXpress in February 2021. SF Airlines and Turkish Cargo also reinstated their scheduled freighter flights to Singapore, leading to a record 30 scheduled freighter operators at Changi. Meanwhile, with rising e-commerce demands during the pandemic, express integrators DHL Express and FedEx Express expanded their network at Changi to facilitate quick and reliable express cargo shipments in the region.

To strengthen Changi's air cargo hub competitiveness, CAG launched the Changi Air Cargo Community System in June 2020 to boost air cargo supply chain visibility and improve operational efficiency through a community data-sharing platform underpinned by collaborative and community-based applications.

Enabling Covid-19 vaccines distribution

With progress in the development of Covid-19 vaccines, which was

deemed requisite to protect health and save lives, CAG and the air cargo community prepared for the major logistical task of distributing the vaccines.

As the first and largest IATA CEIV Pharma¹ certified community in the Asia Pacific, coupled with extensive cold chain infrastructure and facilities, the Changi air cargo hub offers an unbroken airport cold chain necessary for the effective handling of highly valuable and temperature-sensitive pharmaceutical shipments. In 2020, Changi further expanded its Pharma@Changi community with the addition of UPS Supply Chain Solutions and DSV. The collective strength of the community made Changi well-poised as a key regional hub to effectively distribute Covid-19 vaccines to Southeast Asia and Southwest Pacific.

In October 2020, the Changi Ready Taskforce, co-led by CAG and the Civil Aviation Authority of Singapore, was set up to identify and address potential challenges in the handling and transportation of different types of Covid-19 vaccines. Comprising 18 members across the air cargo community, the taskforce collectively ensured the highest level of airport cold chain integrity through secured and certified temperature-controlled facilities, a comprehensive suite of airside temperature protection equipment and solutions, and a pool of qualified and experienced cold chain specialists. With these efforts in place, the first batch of Covid-19 vaccines

¹ CEIV Pharma, or the Center of Excellence for Independent Validators in Pharmaceutical Logistics.

was successfully delivered to Singapore in December 2020. Beyond local imports, the Changi air cargo community supported the successful transportation of Covid-19 vaccines into Australia, New Zealand, and some ASEAN countries.

Facilitating inbound travellers

CAG actively worked with public-private agencies on restarting travel safely and is the co-chair for the Emerging Stronger Taskforce Alliance for Action on Enabling Safe and Innovative Visitor Experiences. Inbound insurance coverage was identified as a key enabler to facilitate the resumption of travel to Singapore. CAG, together with the Singapore Tourism Board (STB) and the General Insurance Association of Singapore, co-led the effort to reach out to private insurers. Travel insurance products, which provided at least S\$30,000 in coverage for Covid-19 related medical treatment and hospitalisation costs, were launched in November 2020. The

availability of this inbound travel insurance coverage was meant to give foreigners peace of mind when travelling to Singapore.

To facilitate business travellers, a consortium led by Temasek Holdings and including CAG, The Ascott Limited, Sheares Healthcare Group, SingEx and Surbana Jurong, opened Connect@Changi in February 2021. The dedicated short-stay facility, located less than 10 minutes away from Changi Airport, allows business travellers from around the world to stay and attend meetings without the need for quarantine. The ability to hold face-to-face meetings in a 'bubble-wrapped' setting for Covid safety has been part of Singapore's efforts to resume business travel, and catalyse the recovery of the MICE and hospitality sectors.

Engaging strategic trade partners

As border restrictions continued, CAG pivoted its efforts towards

strengthening Singapore's tourism appeal with an immediate focus on drawing local visitors to Changi. Through its strategic partnership with STB, CAG took on the initiative to brand and promote Changi Airport, Jewel and the surrounding areas of Bedok, East Coast, Tampines and Pulau Ubin as the Changi Precinct – a unique district in the eastern end of Singapore where the natural outdoors and a wide array of good food, shops and activities amalgamate.

Although travel restrictions made face-to-face interactions difficult, CAG continued to engage its global network of travel agencies and agents through the launch of a new virtual platform, Changi Travel Circle, in January 2021. This new business-to-business community platform has enabled these trade partners to gain easy access to the latest information on Changi and Jewel through interesting activities ranging from fun gamification to webinars.

In November 2020, Changi welcomed YTO Cargo Airlines as one of the four new freighters with scheduled operations.



Service Excellence Amid Challenging Times

CAG has remained steadfast in its commitment to deliver the best airport experience at Changi, with safety, ease of travel and comfort as key priorities. On top of maintaining a highly clean and safe airport environment, the Group worked closely with its partners to ensure that changes in air travel processes, due to new regulatory requirements, were efficiently implemented for a smooth travel journey.

Changi Airport was again named Best Airport by size and region in the Airports Council International's (ACI) Airport Service Quality surveys for airports that serve more than 40 million passengers a year. Changi was accredited by ACI in its Airport Health Accreditation programme for providing a safe airport experience for all travellers, and further became the first airport in Asia Pacific to be certified under ACI's Airport Health Measures Audit Programme. It was also recognised by Safe Travel Barometer as the world's 'safest' airport with a Safe Travel Score of 4.7 out of 5. In Singapore, Changi was awarded the SG Clean

Certification by the National Environment Agency.

Facilitating the safe reopening of borders

With the aviation sector affected by travel restrictions, CAG supported the Singapore government's efforts to reopen air borders through reciprocal or unilateral opening arrangements by swiftly adopting new safety measures to protect airport workers and passengers.

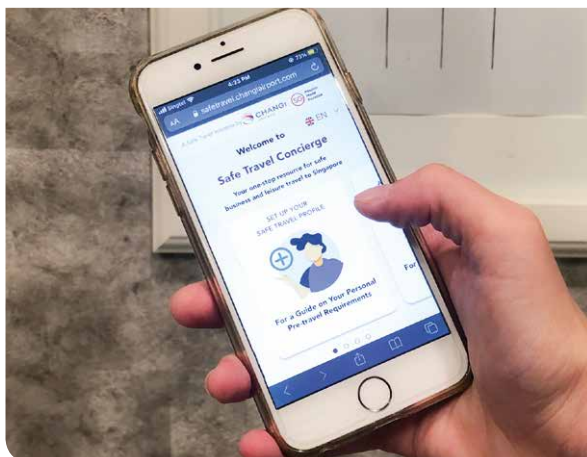
In June 2020, after three months of border closures, CAG and Singapore Airlines obtained regulatory approval to gradually resume transfer and transit services. Two Transit Holding Areas (THAs), with new safety measures and passenger facilitation protocols, were quickly set up in Terminal 1 (T1) and Terminal 3 (T3) to serve these passengers with amenities such as comfortable seating, snooze areas, entertainment zones, free Wi-Fi, shopping concierge, hot food vending machines, as well as food and beverage delivery service. Contactless operations at

the THAs were enabled with the use of passenger count sensors.

Covid-19 testing for arriving passengers

With Covid-19 on-arrival testing (OAT) mandatory for all arrival passengers entering Singapore, dedicated facilities had to be set up for these tests to be safely and efficiently conducted. CAG responded to this need by setting up testing facilities within a short span of 10 days at its airport terminals. When the first passengers under the Reciprocal Green Lane arrangement arrived from China in June 2020, Changi was ready to welcome them.

By March 2021, the testing capabilities at T1 and T3 were ramped up to be able to handle up to 20,000 passengers daily. To improve Covid-19 testing efficiency and passenger experience, CAG partnered with relevant agencies to trial new testing methodologies, such as breath analysers, which have the potential to deliver faster results at a more affordable price.



▲ The launch of the Safe Travel Concierge provides a more stress-free travel experience for arriving passengers.



▲ CAG swiftly set up a 1,440-square-metre facility at Terminal 3 coach stand to provide on-arrival testing to passengers.

Leveraging innovation for smoother journeys

To create a better passenger experience and reduce processing time at the airport, an online portal for passengers to pre-register and make payment for their Covid-19 OAT before arriving at the airport was launched in June 2020. The web portal was subsequently enhanced to become the Safe Travel Concierge (STC). A convenient, one-stop service, the STC enables travellers to pre-book their OAT and have a customised pre-travel checklist to help them meet the entry requirements prior to arrival in Singapore. STC, which supports the safe and gradual resumption of travel under the ambit of Singapore's Emerging Stronger Taskforce Travel Alliance for Action, was co-funded by the Singapore Tourism Board and first trialled at TravelRevive in November 2020. This hybrid tradeshow was a pilot for large-scale business events held in a controlled environment with safety measures. Following its success, the STC was launched to all arriving passengers in April 2021.

Earlier in July 2020, Changi also became the first airport in the world to use infrared proximity sensors to enable contactless self-service check-in. The sensors, installed at more than 180 automated check-in kiosks and automated bag-drops across T1, T3 and Jewel, allowed passengers to hover their finger over the console to make their selection without touching the screen. Lifts within the operating terminals were also fitted with contactless call and floor selection buttons. These easy-to-use, contactless solutions provide an added layer of assurance to all airport users.

CAG also partnered with the Immigration & Checkpoints Authority (ICA) to introduce a new biometric system, which uses facial and iris recognition to verify travellers' identity. The system replaced the fingerprint scanning process for enrolled travellers, overcoming the challenge for those with 'faint' fingerprint or dry fingers. While this system was being trialled at Changi prior to Covid-19, its roll-out across Changi's terminals was opportune during this time of the pandemic outbreak as it enables a contactless immigration process.

Suspending terminal operations for greater efficiency

With much lower passenger and flight numbers, CAG took steps to optimise resources by consolidating Changi Airport's terminal operations. In May 2020, it suspended operations at Terminal 2 (T2) and Terminal 4 (T4). The pause in T2's operations allowed for T2's expansion works to be accelerated. When travel resumes, passengers can look forward to upgraded facilities and systems at the terminal's Arrival and Departure Halls, which include a central Fast and Seamless Travel zone, new check-in islands, enhanced baggage handling systems, and more room for baggage claim belts. The immigration halls would be expanded to support ICA's next-generation border clearance concept. A new transit garden infused with greenery and refreshed commercial offerings in both public and transit areas also await passengers.

At T4, CAG was able to convert part of the terminal to support Singapore's fight against Covid-19. Working with the Health Promotion

Board, CAG converted the terminal's multi-storey carpark into a community Covid-19 swab test site. Opened in July 2020, the swab facility at Carpark 4B caters up to 2,800 swab tests per day.

The first Covid-19 testing laboratory located at Changi was also completed in January 2021. The facility at T4's Carpark 4B roof deck, comprising four laboratory clusters of eight containers each housing automated testing equipment, predominantly serves the aviation sector. The laboratories are able to process 10,000 swab test samples a day.

During the year, CAG also converted T4 into the nation's largest vaccination centre (VC@T4) to support the national vaccination programme. VC@T4 was swiftly set up in seven days, thanks to detailed operational planning and close collaboration between CAG, the Ministry of Health (MOH) and Raffles Medical Group. Besides the flow of operations, special attention was given to the storage and preparation of the vaccines, and to ensure medical assistance was readily available.

As of July 2021, 90% of frontline aviation workers were fully vaccinated since the start of the Sea-Air Vaccination Exercise in January 2021. Beyond the aviation and marine sectors, VC@T4 also facilitated inoculations for other government bodies and frontline agencies. The facility can be scaled up to process up to 4,000 people a day, and can be further expanded.

Adjusting operating protocols to protect airport users

As Changi Airport continues to keep Singapore connected to

Service Excellence Amid Challenging Times

the world, protecting airport users, especially frontline airport workers, from the risk of virus transmission remains CAG's top priority. Working alongside the Ministry of Transport and the Civil Aviation Authority of Singapore, CAG has adopted a risk-based approach in passenger management. This included the segregation of arriving passengers according to the government's prevailing assessment of the countries from which they arrived to tailor handling procedures aimed at minimising the risk of virus transmission. Arriving passengers were organised to proceed directly to their OAT and Stay-Home Notice (SHN) accommodation, if required. Passengers from very high-risk countries were escorted from the time they disembarked from their flight through the airport for separate immigration processing and OAT procedures, until they boarded their dedicated transport to leave the airport.

CAG also put in place multiple risk-based measures to protect airport workers, including the segregation, vaccination, protection and regular testing of airport workers in close consultation with MOH. Airport workers were provided with suitable personal protective equipment and training. These measures met, if not exceeded, international best practices and kept Changi's airport operations safe.

In addition, the ventilation systems in Changi's terminals were also upgraded with air filters of higher filtration capability to better mitigate the risk of virus spread, in line with the Covid-19 defence guidelines published by the authorities. More fresh air was admitted into the terminal building interiors, and a higher rate of air change was effected to keep the indoor air quality as safe as practicable. CAG has also expanded the areas where UV-C lights were installed in the air-conditioning systems to sanitise recycled air flow.

Keeping the Changi Experience alive

Even as Changi Airport faced its biggest challenge in history from the pandemic, CAG continued to maintain the special bond that Changi has with Singaporeans by delighting them with new experiences. In October 2020, the Changi Airport Connector was opened. The 3.5-kilometre-long cycling and jogging path links the airport to East Coast Park and the Park Connector Network, enabling the airport community and visitors to jog or cycle to the airport for the first time. The connector includes the Changi Jurassic Mile, Singapore's newest and largest permanent outdoor display of life-sized dinosaurs, as well as Hub & Spoke Changi Airport, a new pit-stop with a café, bicycle rental shop, and shower facilities. The new initiatives were honoured at the Singapore Good Design Awards, in categories which recognised customer-centric service innovations and creative ideas to build a stronger Singapore.



▲ Changi Airport transformed its terminals into a buzzing festive village to celebrate year-end holidays with visitors.

For its year-end festivities, CAG presented the inaugural Changi Festive Village. At T4, a massive 30-metre-long bouncy castle featuring a four-metre-tall slide delighted little visitors, while Dino-fest, a carnival with 50 stalls of street food, merchandise, and interactive family activities, welcomed visitors of all ages. For the adrenaline junkies, a night go-kart circuit at the arrival kerb side offered a thrilling experience.

In T3, a larger-than-life dinosaur display greeted guests and a themed event, 'tokidoki Kaiju's

The Changi Airport Connector, including the Changi Jurassic Mile, provides visitors a chance to jog and cycle to the airport.



Holiday – Let's Meet Fun again', was set up. Visitors got to enjoy a massive double-storey indoor snow playground, and to get onboard a mock-up plane cabin fitted with plane seats and tokidoki animated seat windows to simulate holiday travels.

Changi, well-known for incorporating flora around its terminals, also opened its nursery during the school holidays for public tours and plant purchase.

Appreciating the ONE Changi community

Throughout the year, CAG actively engaged the ONE Changi community, a key pillar of strength for the airport, through various initiatives that were brought online for the first time. Its ONE Changi app, which facilitates inter-agency interaction, saw a record number of users in financial year 2020/21, thanks to the promotion of digital training and content engagement via the app.

The ONE Changi Appreciation 2020 Digital Event in June 2020 was attended by over 1,000 airport staff. Thirty-one awards were virtually presented to airport partners for their invaluable contributions to Changi. A new award, 'ONE Changi Buddy', was presented to staff who helped engage and transition new colleagues into Changi's working environment and its service-centric ONE Changi culture. The Extra Mile Award was held in September 2020 to celebrate the exceptional service of 44 airport staff. More than 600 staff tuned in to this first digital ceremony.

Regular airport-wide staff appreciation initiatives were also held during the year to thank frontline staff and raise morale. In June 2020, CAG launched its first digital ONE Changi Cares campaign to encourage the airport community to show care for one another through good personal hygiene, acts of kindness, and messages of encouragement.

Developing skills and talents

A ONE Changi Digital Learning Festival was held virtually in January 2021. Centred on three themes – understanding inclusiveness and disabilities, pivoting customer experience, and boosting resilience, CAG developed the learning content with its airport partners. Industry leaders also shared their efforts in reimagining customer service using new technology and innovations. The four-day event saw over 3,300 airport staff enriching their skills through the ONE Changi app.

For a more inclusive airport experience, CAG teamed up with Rainbow Centre Training & Consultancy to introduce a new CARE Ambassador Programme. Staff were taught to identify and understand the needs of persons with physical and/or invisible disabilities. Since its launch in June 2020, almost 300 frontline staff have been trained and certified as Changi's CARE Ambassadors.

Staying Operationally Ready



◀ Changi Airport Fire Station 3 was operationalised in December 2020 to support the operations of the new Runway 3.

While flights at Changi Airport have been vastly reduced as a result of Covid-19, the safety of passengers on every flight handled has stayed paramount. CAG closely guarded its flight operations and airside functions throughout the year, as it pushed ahead with key operational projects to position Changi as a future ready airport.

Operationalising Runway 3

In December 2020, CAG marked a major milestone with the opening of Runway 3 for civilian flights. This is part of its long-term airport master plan to boost aircraft handling capacity with a three-runway system. The project involved lengthening and converting a military runway for co-use with commercial flights, as well as constructing supporting taxiways to link it to the rest of the existing Changi aerodrome.

Prior to Runway 3's launch, Singapore's Air Navigation Order required the Civil Aviation

Authority of Singapore (CAAS) to certify that the runway and its associated taxiways complied with all civil aviation regulatory requirements. CAG successfully passed all seven phases of the comprehensive audit by CAAS. The Changi aerodrome certificate was updated to include the third runway and its taxiways, and was issued to CAG in November 2020.

With thorough preparations, the first scheduled commercial flight, SQ856, successfully took off from Runway 3 to Hong Kong at 10.11am on 3 December 2020. In the next few years, Changi Airport will operate with Runways 1 and 3, while Runway 2 is closed for infrastructure upgrading.

Preparing for emergencies

As part of Runway 3's operations, CAG converted the Changi Airbase East Fire Station into Fire Station 3 and upgraded the Airport Emergency Service (AES) equipping there to support civil aircraft operations. A new Mobile

Aircraft Simulator was brought in for tactical training on large-scale aircraft firefighting and rescue scenarios. The AES crew was also trained on rescue equipment for civil operations. More vehicles, such as the newest foam carriers and water tenders, were added to bolster the airport's firefighting capabilities.

To test Changi's emergency preparedness, CAG organised the inaugural Airport Emergency Plan webinar for all airlines and ground handling agents, supported by table-top exercises and familiarisation sessions. In November 2020, a ground deployment exercise simulating an aircraft land crash was held at the new terrain at Runway 3. Twenty-seven agencies comprising representatives from the airport community and mutual aid partners, as well as Singapore Airlines, participated in the emergency exercise. Due to Covid-19 restrictions, CAG creatively deployed mannequins and casualty tags in place of

'casualty' role players to inject realism.

At Seletar Airport, CAG also held a virtual table-top exercise in September 2020 with its stakeholders to ensure its emergency preparedness.

With fewer flights during the year, 75 firefighters from the AES team were trained to handle additional airside duties, such as wildlife dispersal and counter-drone operations. AES also supported other airside operations, such as Runway 3's opening, taxiway marker-board removal and aircraft stand inspections.

Promoting a culture of safety

A safe airport environment is crucial to creating a positive travel experience for passengers and to enable staff to return home safely every day. In financial year 2020/21, 10 individuals and 38 team members from 12 teams were recognised for their

outstanding safety acts and safety-related innovation at the annual CAG Airport Safety Awards. The programme continued to receive strong support and participation from key airport partners.

The Service Workforce Empowerment & Experience Transformation mobile app, which enables every staff in the airport community to report potential hazards, also welcomed 5,000 new users during the year. Even with fewer staff on the ground due to Covid-19, over 1,000 cases were reported, reflecting the airport community's strong sense of safety and allowing potential hazards to be quickly addressed.

For maintaining its safety record, Changi Airport achieved a deficiency-free rating by the International Federation of Air Line Pilots' Association for the 39th consecutive year since its opening in 1981.

Using new technology to improve efficiency

CAG continued to adopt new technology to improve its airside operations in 2020/21. It embarked on video analytics trials to provide greater visibility of the progress of aircraft handling activities to aid operational teams in data-driven decision making, preempt turnaround delays, and achieve better on-time performance. CAG also trialled an autonomous guided vehicle to haul baggage in a live operating environment.

CAG procured a new aircraft recovery kit capable of lifting and transporting up to an A380 aircraft type to respond swiftly to disabled aircraft incidents in the aerodrome and ensure an expeditious and safe return to operation. Aircraft recovery personnel were trained to use the equipment, and a ground deployment exercise with



A new aircraft recovery kit is procured to help improve response time to disabled aircraft incidents.



Staying Operationally Ready

stakeholders was conducted in November 2020 to familiarise them with their respective roles and the new procedures.

In December 2020, working closely with CAAS' Air Traffic Control and Aeronautical Telecommunications & Engineering personnel, CAG successfully switched over to a new Airfield Lighting Control System (ALCS). A mission-critical airport specialised system, the ALCS allows air traffic controllers to better manage the approach, runway and taxiway lightings for the safe landing, take-off and manoeuvring of aircraft in the airfield in all weather conditions. The ALCS was rolled out in tandem with CAAS' introduction of a new Advanced-Surface Movement Guidance & Control System, which allows air traffic controllers to manage both airfield ground traffic situational awareness and airfield lighting control more effectively. Rigorous testing was done to ensure both systems worked seamlessly with each other before they were commissioned for the opening of Runway 3.

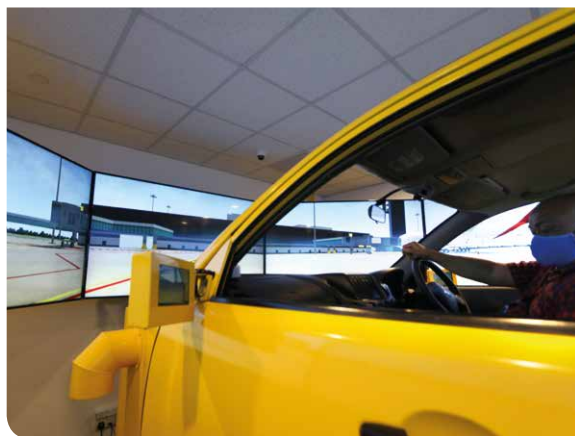
In February 2021, CAG rolled out a new airfield driving simulator to improve drivers' performance and train them to handle special scenarios in a safe and controlled environment. The simulator used virtual reality technology with 3D scenarios and terrains as well as a 3DoF (degrees of freedom) motion platform to increase training realism. Besides training, CAG also upgraded the GPS-based system in airfield vehicles to remind airfield drivers to use the correct radio frequency to maintain contact with Air Traffic Control when travelling on the taxiways between Changi West and Changi East.

A pilot trial for a GPS-based mobile app software solution to digitise airfield underground service locations commenced in March 2021. This digital database allows maintenance staff to know their exact physical locations in the vast, open airfield especially in the darkness of the night, and at the same time, easily track the whereabouts of underground cables and services, including manholes, draw pits, transformer pits and airfield lighting cable

circuits. Through this app, CAG's Engineering & Development (E&D) team can map, trace and identify exact fault locations for expeditious rectification, repair and recovery of service. The app will be scaled up to cover the whole airfield upon the successful completion of the pilot trial at Runway 3.

Smooth implementation of taxiway renaming

In August 2020, CAG successfully implemented the third and largest phase of a five-stage multi-year project to rename all of Changi Airport's taxiways to dovetail with future airfield expansion plans at Changi East. Phase 3 encompassed renaming taxiways in the western part of the aerodrome. The timeline was brought forward to make use of the period of low airport traffic due to Covid-19 to execute the works safely. Despite having leaner manpower and resources, as well as the need to adhere to Covid-19 safe management measures, CAG's E&D, Airport Operations Planning and Airside (AOP&A) and contractor teams worked closely with CAAS to



▲ A new airfield driving simulator was rolled out to improve drivers' performance.



▲ The annual Airport Safety Awards continue to receive strong support from the airport community.

CAG trials the use of autonomous tractors to transfer baggage between aircraft and the baggage handling area.



execute a safe and smooth change of 206 taxiway signs overnight. This enabled Changi's taxiways to reopen on schedule, with minimal disruptions to flight operations.

Parking grounded planes

During the year, Changi Airport continued to house over 200 grounded aircraft as travel demand remained low. In accordance with CAG's contingency aircraft parking plan, aircraft used more often for flights were parked at aircraft stands nearer the terminals for the ease of operations, while those which were flown occasionally were parked on taxiways and remote stands further away. The parking plan was adjusted regularly in close consultation with the airlines and their ground handlers to optimise space and respond to operational needs, such as flight facilitation and periodic aircraft maintenance. CAG's AOP&A team oversaw the towing and parking operations closely to ensure the safety of aircraft and other airside users.

Building in-house capabilities

The challenge of Covid-19 has provided an opportunity for CAG to build in-house expertise, pivot its workforce, and future-proof its business. One area has been the in-sourcing of the airport's Fault Management Centre (FMC) round-the-clock manning function by E&D staff for better tracking, analysis and resolution of faults. By January 2021, four E&D staff had been trained to assume the roles of FMC leaders and supervisors, improving existing operations to build a more robust Fault Management System.

To strengthen in-house capabilities in Reliability Centred Maintenance (RCM), E&D also trained 20 in-house facilitators to set up an RCM champion system for enhancing engineering asset reliability and optimising maintenance resources. Apart from improving equipment performance, the RCM framework will increase manpower productivity, reduce operating cost, and transform maintenance operations through the adoption of

smart sensors, digital technology and innovation towards leaner and more targeted data-driven actions. To date, CAG is on track to implement RCM recommendations for about 30 systems.

Managing security costs and supporting new businesses

With the suspension of operations at Terminals 2 and 4 in May 2020, operating costs for security functions were reduced by more than 65% through manpower rationalisation and in-sourcing.

To support the Group's new business opportunities, CAG's aviation security team worked with different agencies to review security hurdles set by previous regulations. Provisions were made for non-travelling public to visit stores in the airport's restricted areas, with strict security control process and safe distancing measures. This helped to boost Changi's transit retail sales. Similar support was given to home-based carrier, Singapore Airlines, for its Restaurant A380@Changi event in October 2020.

The Future of Changi Airport

With Covid-19 disrupting air travel, the Singapore government decided in June 2020 to take a strategic pause on the development of Changi Airport's new Terminal 5 (T5) for at least two years. This is to allow for a major review of the pandemic's impact on the aviation sector, and to study how current designs could be adapted to meet potential new requirements.

T5 remains an important long-term infrastructure investment for Singapore's economy. Critical works under the 1,080-hectare Changi East development project continued during the year, amid the challenge of protecting the health and safety of workers at Changi East.

Caring for Changi East workers

Workers at the Changi East dormitories were among those affected by the Covid-19 outbreak at the start of financial year 2020/21. CAG set up a task force, and work groups were quickly created to tackle various issues. New temporary accommodations were built to ringfence workers involved in strategic construction projects. Regular disinfection and deep cleaning of dormitories were organised. To enhance safe distancing and segregation, barricades were set up between blocks and floors, with stairways controlled, and common facilities closed.

Ensuring workers' well-being remains a top priority. Besides

onsite medical support, available buildings were converted into medical and isolation facilities, so that mass swabs and serology tests could be conducted swiftly. Each worker's health status was closely monitored, and sick cases promptly reported.

Changi East's Project Directors conducted briefings to workers to provide support and assurance. Newsletters were sent out daily, and regular meet-the-people sessions and surveys were organised. CAG also arranged for catered meals, solicited donations of essentials and care packs, and set up an onsite remittance counter to better support the workers' needs.

Restarting work safely

When the suspension of construction activities was lifted in June 2020, CAG undertook a massive exercise to rehouse thousands of Changi East workers onsite, reduce the number of residents per room, and reshuffle all workers into closed teams who would live and work together. A special Dorm Management Unit was formed to monitor and oversee the activities in the dormitories. Several temporary living quarters were set up, and 'floatels', or floating accommodation, were also used as alternative offsite residences. Further mitigation measures, such as dedicated transport, work zones and rest facilities, were implemented onsite.

Construction of a 10,400-bed Coastal Dormitory to support national efforts to increase dormitory capacity in Singapore began in July 2020, and is slated for completion around mid-2021.

The close partnership between CAG, the Singapore government, contractors and dormitory operators helped to contain the spread of the virus and ensure workers' welfare. From September 2020 onwards, there were no new Covid-19 infections among workers living in onsite dormitories at Changi East.

Towards a three-runway system

Changi Airport achieved a major milestone in December 2020 when it opened Runway 3 for civil operations. A rigorous procedure of testing and commissioning, known as Operational Readiness, Activation and Transition, was conducted in the lead-up. The Changi East project team also partnered with CAG's Airport Management and Engineering and Development clusters and worked with auditors from the Civil Aviation Authority of Singapore to achieve the aerodrome certification required to operationalise Runway 3.

Construction work on the tunnel systems continued in 2020/21. Changi East, when fully completed, will strengthen Singapore's air hub status and ensure Changi's continued competitiveness.

➤ On 3 December 2020, Changi Airport welcomed its first commercial flight on the newly opened Runway 3.



Building New Capabilities in Retail

As early as 2019, CAG had already begun exploring commercial growth opportunities in the non-traveller market. The efforts laid the foundation for its quick shift towards the domestic consumer market as Covid-19 continued to pervade and dampen the performance of Changi's airside and landside concessions in financial year 2020/21.

With various initiatives rolled out in the year to mitigate the impact of the pandemic on Changi's travel retail business, CAG recorded S\$280 million in concession sales in 2020/21. This was about 11% of the previous year's sales, despite passenger traffic being less than 2% of pre-Covid levels.

Throughout this time, CAG remained committed to helping its commercial partners manage the challenges of a depressed sector. It offered tenants additional rebates and rental waivers beyond the financial assistance provided under the government's aviation sector assistance package.

CAG also worked with concessionaires to identify retraining and redeployment

opportunities for their staff, so as to protect as many jobs as possible during the downturn. To help tenants drive sales, a concerted effort was also made to ramp up marketing and promotional campaigns. The assistance to tenants even extended to helping them source for and procure hand sanitisers and masks in the early days of the outbreak when such items were in short supply.

Non-travellers get to enjoy Changi's retail offerings

As consumers turned to online shopping, Changi's e-commerce portal iShopChangi.com stepped up to capture this growing segment. It transformed itself and switched focus from a buy-and-fly business model to one that actively targeted local residents. The new approach saw Singapore residents enjoying tax-absorbed shopping for more than 20,000 products, from top brands across wines and spirits, beauty, electronics, fashion and lifestyle products, without flying. This transformation brought tenants new groups of customers – a business segment that is expected to grow even post-Covid.

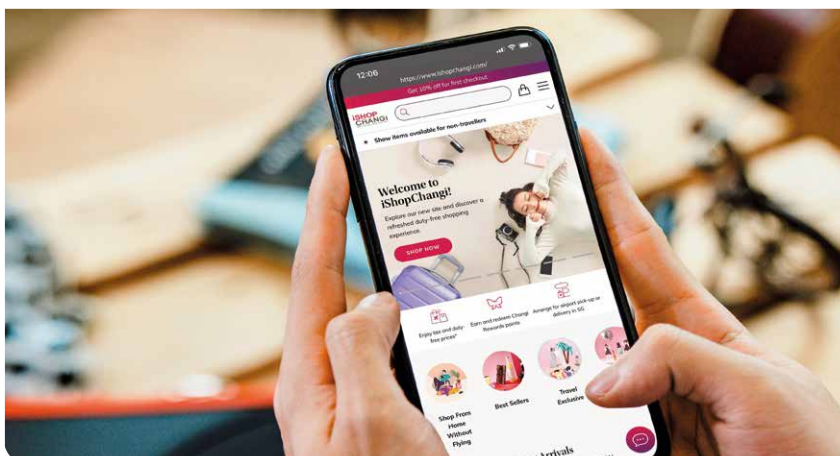
To enhance the retail experience, CAG also pivoted the Changi Shopping Concierge service. The complimentary service caters to passengers who might not be able to physically visit the stores or who prefer a personalised shopping service. It also serves non-travellers through online chats, while they shop in the comfort of their home. For customers unable to travel and who missed spending time in the airport, especially in the transit area, airside shopping tours were conducted to keep them engaged. CAG also partnered with its tenants to launch a series of wines and spirits appreciation classes, where guests had the chance to taste exquisite wines and spirits and pair them with cuisine specially prepared by The Kitchen by Wolfgang Puck. At the end of the sessions, they could purchase tax and duty paid wines and spirits from Lotte Duty Free at special prices.

The initiatives received overwhelming interest, with more than 9,700 invited guests from the Changi Rewards loyalty programme and key CAG partners attending these events.

Shopping and dining get better with revitalised terminals

To emerge stronger from the crisis, the Group continued to invest in enhancing the Changi Experience for visitors when they can travel again. Along with the renovation works at Terminal 2 (T2), additional retail as well as food and beverage (F&B) outlets, including a duplex F&B concept, will be introduced.

Basement 2 of Terminal 3 (T3B2) was also revitalised with new brands such as CHICHA San Chen, Ichikokudo Hokkaido Ramen,



▲ iShopChangi transformed itself and actively targeted local residents too.

Building New Capabilities in Retail



▲ T1 West was spruced up to include more greenery, with seating capacity increasing by 30%.

Yikowei and Rainbow Lapis. Pop-up retail stores featuring lifestyle products, handicrafts, as well as mother and children fashion were refreshed every few months to add buzz and excitement to the zone.

In December 2020, CAG welcomed Swensen's back to Changi Airport at T3B2. The all-time favourite restaurant had closed its T2 outlet after 38 years of operations at the airport following the closure of the terminal for renovation works. The return of the well-loved brand enhanced the dining options at T3.

The year 2020/21 also saw the completion of reconfiguration works at the west wing of the Departure Transit Hall in Terminal 1 (T1), which helped to rejuvenate the zone and elevate the overall shopping and dining experience. The refreshed design, featuring more greenery, aimed to bring the outdoor garden indoors.

The entrance to the secondary street was widened and a new F&B cluster was anchored in the zone to drive footfall. Customer experience was enhanced with more seating and facilities such

as Internet kiosks. A new range of F&B brands and concepts such as the Mango Tree Kitchen/ Archipelago (a 2-in-1 concept), Jamie's Deli (grab-and-go concept by British celebrity chef Jamie Olivier) and Pontian Wanton Noodle was also introduced.

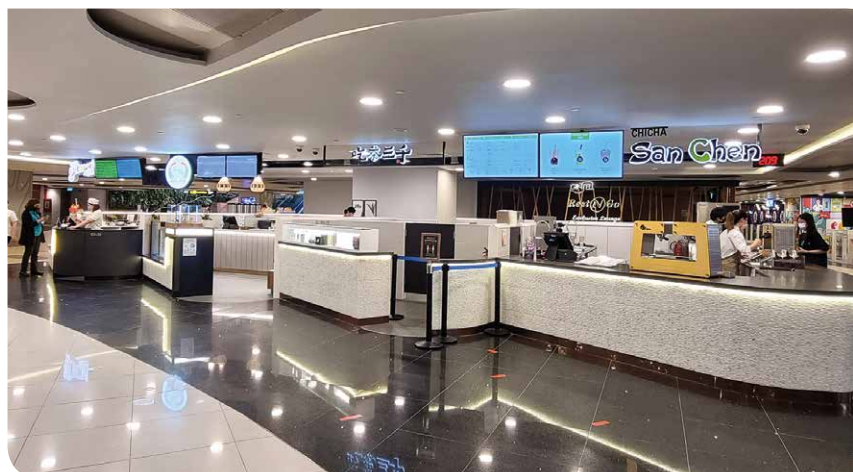
CAG and its partners Singapore Airlines (SIA), SATS and DBS also made use of the lull travel period to upgrade the lounges in the airport terminals. SATS Premier Lounge in T1, which opened in January 2021 after four months of renovation,

adopted a Peranakan theme for their 700-square-metre space. The DBS Lounge in T3, which was completed in October 2020 after eight months of renovation, took on a sustainability theme by incorporating more plants, wooden furniture and the use of recycled materials. SIA also completed their Krisflyer Gold and SilverKris business class express lounges in August 2020.

The revitalisation of the lounges will put Changi Airport in good stead to continue to be a market leader in the provision of premium travel amenities when air travel recovers.

Changi Eats gives tenants a booster jab in the arm

When Singapore implemented the Circuit Breaker in April 2020, Changi Airport's F&B operators were badly hit from the restrictions imposed on dining in. To support its eateries, CAG launched the Changi Eats delivery service in August 2020. This allowed locals to enjoy F&B offerings from Changi and Jewel delivered to their homes, with the option to mix and match orders from up to five outlets in a single delivery.



▲ T3B2 was revitalised with new brands such as CHICHA San Chen and Yikowei.

This initiative provided participating tenants an additional sales channel and allowed them to expand their market catchment beyond Changi Airport. As of March 2021, there were more than 40 tenants on Changi Eats, offering over 1,500 products. CAG had actively supported Changi Eats with more than 20 marketing campaigns over a six-month period to promote the service and drive sales.

Exciting customers in new and virtual ways

As in-store shopping remained low with phased reopening post Circuit Breaker, CAG found new and novel ways to engage and serve its customers online. Following the popular Save 2xGST promotion

in July 2020, a live auction was organised on Facebook in August 2020, generating a reach of 142,000 viewers.

iShopChangi also launched live streaming sessions featuring celebrities pitting themselves against one another in challenges while reviewing product deals during iShopathon, the online portal's annual shopping campaign. To keep customers engaged, virtual classes were also jointly held with beauty brands to provide shoppers with the latest beauty tips.

New digital services were also launched to offer customers an omni-channel experience. A new feature in the iChangi app allowed customers to carry out

an array of activities, without the need to physically queue. These include booking of activities and events, as well as redeeming of shopping and parking promotions and premiums. The app is also being revamped to include more features, such as facilitating contactless payment at the airport.

Following the launch of newly curated activities and promotions, the membership of Changi Rewards grew 8% to 1.8 million members during the year.

The year-end festivities at Changi Airport saw visitor numbers to the public areas increasing by 127% and landside sales improving by 159% in December 2020, compared to the first half of the year.

Capturing New Business Opportunities

Changi Travel Services (CTS), a wholly-owned subsidiary of CAG formed in 2012, has been providing travel solutions for leisure and business travellers. With its travel business impacted by the Covid-19 pandemic, CTS was nimble and fast to adapt by leveraging its competencies in e-commerce to capture new business opportunities.

Serving both residents and travellers

The e-commerce platform GetIt was launched in April 2020 to serve the needs of local residents when Singapore moved into the Circuit Breaker period. From its humble beginnings, GetIt now carries one of the widest ranges of alcohol, beauty and electronic products in Singapore for online orders, and

achieved close to S\$30 million in sales within its first year of operations.

As international borders gradually opened for essential travel, CTS launched ChangiAssure, Singapore's first Covid-19 insurance for foreign visitors. The plan is underwritten by HL Assurance and administered by the Singapore Deposit Insurance Corporation. One could make instant claims at Changi Recommends counters in Changi Airport.

Changi Recommends has been offering concierge services to travellers, allowing VIPs to breeze through airport checkpoints. During Covid-19, the unit offered its meet and greet services to seamen

arriving or transiting through Singapore, helping to ensure compliance to the necessary safety procedures. It also assisted to roll out TraceTogether app to visitors.



▲ An employee preparing to send out items ordered by customers via the GetIt platform.

A Sparkle in the Dark

Jewel Changi Airport (Jewel), with its multi-faceted offerings of retail shops and attractions, continued to attract footfall despite the lack of foreign visitors during the global pandemic. With Singapore's borders still largely closed to many countries, Jewel Changi Airport Development (JCAD) stayed committed to supporting its tenants during this difficult period. When Singapore's Circuit Breaker measures were imposed in April 2020 which further impacted retail businesses, JCAD provided additional relief to its tenants by extending rental rebates till June 2020.

JCAD also worked with partners to introduce delivery services during the Circuit Breaker period and stepped up marketing initiatives to help capture local visitors as Singapore moved into

Phase 2 of reopening in mid-June 2020. By then, almost all of Jewel's stores and attractions had opened.

Popular brand names such as %Arabica, Chicha San Chen, Devil Chicken and Luke's Lobster were introduced. It also launched the Jewel Privileges Programme to target local shoppers and worked with financial institutions Citibank, DBS, and Mastercard to roll out attractive shopping and dining promotions.

In November 2020, to encourage repeat visitors to Jewel's attractions, the PlayAtJewel annual pass was launched. Some of the year-long perks of the pass include discounts at retail and F&B outlets, as well as special rates for stays at YOTELAIR Singapore Changi Airport. More

than 200 family passes were sold in the first five days.

These initiatives helped to promote Jewel as a destination for a local holiday with overseas travel on hold.

Bringing outdoor fun indoors

In conjunction with Changi Airport's 2020 year-end festivities, Jewel also hosted the inaugural 'Glampcation in the Clouds' during the December school holidays, where guests could camp overnight in tents on Jewel's highest level, Cloud9 Piazza, with a view of the HSBC Rain Vortex. Glamp tents were also set up for those who wanted to spend the night in a cool green oasis at the ground level of the Shiseido Forest Valley. The exclusive experience with



Jewel delighted Singaporeans with the inaugural 'Glampcation in the Clouds' during the December school holidays.



just six tents per night were fully sold within 36 hours of the sales launch.

During the day, while adhering to the government's prevailing safe management measures, the glamp tents at Cloud9 Piazza were converted to glam-picnic spots for groups of up to five. Guests had the option to add on a picnic basket with snacks, drinks and card games.

The Changi Experience Studio also curated a 2-day/1-night stayover programme where guests learnt more about Changi Airport through behind-the-scenes tours, before spending the night in the comforts of the studio.

These unique stayover options transformed Jewel into an exciting staycation destination during the year-end break.

As Singaporeans remained confined in the country due to tight border controls, many found their way to Jewel for their local holiday. In December 2020, Jewel's footfall was 50% of what it recorded for the same period the previous year, despite the lack of foreign tourists.



▲ Jewel ushered in Chinese New Year with colourful decorations such as life-sized Chinese zodiac characters and bright Celosia blooms.

Ushering in the Niu Year

To welcome the Year of the Ox in February 2021, 12 life-sized Chinese zodiac characters, with the tallest Ox standing at 1.8m, were displayed at the Shiseido Forest Valley. Visitors to Jewel could scan the QR code on the zodiac characters to check their 2021 horoscopes. They could also soak in the festive atmosphere with the floral displays featuring bright Celosia blooms around the HSBC Rain Vortex, and pussy willows at the Petal Garden in the Canopy Park.

Maintaining high cleanliness standards

As promotional activities were ramped up and footfall increased, JCAD ensured that the mall's premises were kept safe for guests and staff with high standards of cleaning and strict compliance to safe distancing requirements. Additional resources were deployed on the ground to help tenants and guests adhere to the measures. Jewel's efforts in maintaining high levels of cleanliness and hygiene was recognised with the SG Clean certification awarded to the mall and Canopy Park attractions.



▲ Jewel continues to maintain high cleanliness and hygiene standards by stepping up on cleaning and disinfection measures.



▲ Jewel welcomed Singaporeans with year-end activities and footfall in December was half of that the year before.

Maintaining a Global Presence

Changi Airports International (CAI), a wholly-owned subsidiary of Changi Airport Group, invests in and consults for airports around the world. Its portfolio includes airports in Brazil, China, India, Japan, the Philippines and Russia. In the past year, it consulted on projects in China and Southeast Asia.

CAI's business was not spared from the global impact of the pandemic. To maintain a stronger cash position, the company moved towards an asset-light business model, pursuing longer term operations and management projects, as well as commercial joint ventures.

As part of its ongoing effort to build its capabilities, CAI is also ramping up on collaboration with the Group. The collaboration enables the exchange of expertise across multiple airports around the world, thereby strengthening CAI's capabilities and enriching the Group's overall experience in the aviation industry.

Brazil

CAI has a 51% stake in the concessionaire which operates Tom Jobim International Airport in Rio de Janeiro, Brazil.

Due to the worsening Covid-19 situation in Brazil and restrictive border policies of Rio de Janeiro's traditional source and destination markets, passenger traffic decreased 83% year-on-year.

On the commercial front, the airport is reviewing its tenant mix in view of the lower traffic and an increase in early lease termination. To enlarge its e-commerce business, the airport team is upgrading its platform to integrate

a wider variety of products and services related to Rio de Janeiro tourism and travel retail.

Despite the difficult market conditions, Tom Jobim International Airport continued to receive notable awards. It came in second among Brazilian airports for the 'above 15 mppa category' in the 2019 Passenger Satisfaction Survey. In the same survey, it came up tops for 'Passenger Services' and 'Efficiency of Passenger Security Processes'.

Tom Jobim International Airport was also rated one of the most advanced airports in Brazil in the first ever 'Sustainable Airfields' project by the National Civil Aviation Agency.

The airport was also the first airport in Brazil to win the World Travel & Tourism Council's seal for its measures to protect the safety of passengers and the airport community amid the health crisis. In December 2020, the airport attained the Airport Health Accreditation (AHA) certification by the Airports Council International (ACI).

China

Chongqing

CAI has a commercial joint venture with Chongqing Airport Group – Sino-Singapore Chongqing Airport Commercial Management Co., Ltd – which was formed to manage the non-aeronautical business of Chongqing Jiangbei International Airport. CAI holds a 49% stake in the joint venture, which maintained a net profit position in financial year 2020/21.

As the Covid-19 situation in China stabilised throughout the year,

domestic traffic saw a slight growth of 3% compared to the previous year. International traffic remained low due to continued travel restrictions.

The joint venture provided rental rebates to airport tenants above and beyond state requirements. New ideas were also developed to help increase sales. An e-commerce portal was launched to capture the sizable airport community, with plans to extend it to passengers and residents living near the airport.

Other Chinese airports

In December 2020, CAI clinched a five-year commercial partnership with Guangzhou Baiyun International Airport and will support commercial tender work for the airport's new Terminal 3, the existing Terminal 2 and a satellite terminal.

CAI also won new contracts to provide advisory services to Changsha Huanghua International Airport, Yantai Penglai International Airport and Xiamen Xiang'an International Airport.

CAI continues to partner with Shenzhen Bao'an International Airport to uplift its airport service quality based on a three-year technical services agreement which began in 2019. It also won a tender to provide technical advisory services to the airport, which is building a mixed-use aviation complex.

India

Durgapur Aerotropolis is India's first privately managed airport city. CAI has a 30% stake in Bengal Aerotropolis Projects Limited, which develops the aerotropolis.

In late May 2020, domestic flight services in India were allowed to resume in a gradual and calibrated manner while international flights continue to be suspended. At Kazi Nazrul Islam Airport, SpiceJet resumed operations from September 2020 to Mumbai, Chennai, Delhi and Bangalore. The average load factor was encouraging.

Despite the pandemic and initial lockdown measures, there was a pickup in the demand for land at the aerotropolis, with the sales result surpassing the forecasted target and previous year's figures.

Japan

Fukuoka Airport is CAI's first investment in Japan. A CAI consortium, through its operating company, Fukuoka International Airport Co. (FIAC), took over airport operations on 1 April 2019.

Like elsewhere, Japan's aviation industry has been hit hard by

border closures and travel restrictions resulting from Covid-19 and the airport saw a reduction in flights. Job cuts were also implemented. Domestic traffic has since shown signs of recovery, but international flights are still severely impacted by border controls. Fukuoka Airport now has about 10 weekly international passenger services from seven airlines and registered 6.5million passengers in 2020/21, a decline of 72% from the previous year.

To manage costs, FIAC has deferred capital expenditure programmes and obtained financial support from government agencies and lenders.

On the commercial front, FIAC has provided rent reduction to ensure existing tenants continue to operate and serve customers during this challenging period.

Meanwhile, service quality remained a priority for the airport operator. The domestic passenger terminal was revitalised in August 2020 to enhance its food and beverage (F&B) experience. Besides new F&B and retail stores, it also opened a 360-degree observation deck with full view of the runway.

Philippines

A CAI consortium began a 25-year concession to operate and maintain Clark International Airport in 2019. CAI holds a 15% stake in the operating company – Luzon International Premiere Airport Development Corp (LIPAD).

Due to the pandemic, total passenger traffic declined by more than 96% compared to the previous year. Domestic flights were limited to Cebu City and Davao, while international ones were limited to the Middle East, Singapore, and South Korea.



The observation deck at Fukuoka Airport's domestic terminal has full view of the runway and includes an alfresco seating area.



Maintaining a Global Presence



▲ As travel restrictions eased, passenger traffic at Anapa International Airport rebounded and grew by 16%.

Throughout the year, LIPAD actively engaged its airline partners on traffic recovery and plans were made to develop the airport's cargo operations.

Fit-outs for the new 110,000-square-metre passenger terminal were underway, including self-service check-in and bag drop solutions, as well as a state-of-the-art baggage handling system. Operational readiness workshops were held, and simulation flights planned in preparation for the terminal's opening in 2021.

In November 2020, Clark International Airport became the first airport in the Philippines to achieve ACI's AHA certification for its biosafety measures.

Russia

Krasnodar Region

CAI's airports in the Krasnodar region – Anapa, Krasnodar and Sochi – were also adversely impacted by Covid-19 and the suspension of international flights, as well as substantial

domestic flight cancellations between April and June 2020.

As restrictions gradually eased during the year, domestic traffic rebounded. Passenger traffic at Anapa International Airport grew by as much as 16%, compared to the previous year. Total passenger traffic at the three airports recovered to 89% of the year before.

Detailed design for the new 82,680-square-metre passenger terminal at Krasnodar International Airport is currently underway. When completed, it would double the airport's handling capability to almost 10 million passengers a year. The VIP terminal of Krasnodar International Airport was upgraded while Sochi International Airport also revitalised its landside and airside spaces.

The airports also launched e-commerce initiatives to enable online booking of airport services, resulting in higher sales figures.

At the ACI Airport Service Quality Awards 2020, Sochi International Airport was named Best Airport in Europe for the sixth consecutive year. It was also recognised in ACI's new Voice of the Customer list, for its efforts in continuing to prioritise passengers and respond to their changing needs amid the Covid-19 pandemic. Krasnodar Airport also won "Best Airport: Meeting Challenges 2020" at Russia's National Aviation Infrastructure Show 2021.

CAI has a 30% stake in the airports and their management company, Aerodynamics (formerly Basel Aero).

Vladivostok

At Vladivostok International Airport, passenger traffic saw a larger decline of 64% compared to the previous year due to its higher share of international traffic.

Despite the drop in passenger volume, Vladivostok International Airport retained its leading position in cargo traffic through a 19% growth, taking an improved fifth spot among Russian airports in the year and retaining the first place among airports in the Far Eastern Federal District.

The airport continued to engage airlines and partners on traffic resumption plans and the development of domestic tourism. Various initiatives were also rolled out to improve operational efficiency, manage costs and profitability, as well as to prepare for full traffic recovery.

Through Sochi International Airport, CAI holds effective stakes of 20% in Terminal Vladivostok and 19% in International Airport Vladivostok.

Building a Stronger and More Cohesive Talent Pool

As CAG adapted to the rapidly changing aviation landscape, its people had to be agile to adopt new ways of working and develop new skillsets to design and execute transformative projects. CAG kept focus on the well-being and engagement of its people, ensuring they could transit seamlessly to work from home effectively, while continuing to invest in building a future ready workforce.

Transitioning to working from home, keeping employees safe

With the need to transition a significant part of its workforce to work from home, CAG moved quickly to familiarise employees with the various workplace tools. Throughout the year, it built on its digital suite of tools and solutions to equip and enable employees in their work. For example, DocuSign was introduced to enable electronic signatures so that legally binding contracts and agreements could continue to be shared and administered by employees digitally, in a secure manner.

Besides complying with government directives, CAG also ensured employees were well protected at the workplace by supplying Personal Protective Equipment (PPEs) such as face masks and hand sanitisers. For roles that involve interactions with foreign workers and in-bound passengers from countries at risk, CAG conducted training for its employees on the use of PPEs, and provided enhanced PPEs such as isolation gowns, gloves, N95 masks and face shields. Frontline employees also took regular swab tests.

A digital application was also developed for employees to submit daily health declarations and book time slots when they needed to return to the office to work.

Building a future ready workforce and growing its people

CAG launched a new FutureReadyME initiative to empower its employees to take ownership of their learning in preparation for the digital future of work. It comprises a curated

suite of programmes in key digital areas, an interactive challenge where learners get recommended learning paths, and funding support for upskilling in targeted areas. The three-year plan to train all its employees under FutureReadyMe is on track. As of December 2020, close to 50% of CAG employees had undergone digital training.

A new Growth Mindset programme was also rolled out to build employees' learning capacity and agility, by first recognising their fixed mindset triggers and then developing strategies to help them thrive with change.

Project Starship was another initiative developed to allow employees to have mini-attachments outside their regular portfolio and be exposed to different areas of CAG's business. The initiative was a leap forward in strengthening cross divisional collaboration, ensuring that employees were meaningfully engaged in work that drove impact and learning. It took all but two months for this programme to be rolled out. To date, there are 82 live projects on Starship driven by seven divisions across the Group.

With a default work-from-home arrangement, CAG ensured that all employees had continued access to quality learning resources. LinkedIn Learning was incorporated in CAG's Learning Management System, giving employees access to more than 8,000 online courses.

Strengthening Terminal H – Heartware

Employees' well-being was of utmost concern when there was a



▲ To assuage staff anxiety amid the uncertain external environment, CAG's senior management provided more regular updates via virtual townhalls.

Building a Stronger and More Cohesive Talent Pool

sudden switch to work-from-home arrangements due to the Covid-19 situation. For this reason, CAG pushed out a Circuit Breaker Pulse Survey two weeks into Singapore's Circuit Breaker period (7 April to 1 June 2020) to check-in with employees on how they were coping. The findings served as a barometer to understand employee sentiments and enabled targeted interventions to be made.

To assuage staff anxiety amid the uncertain external environment, CAG's senior management also provided more regular updates. Organisation-wide townhalls and cluster-specific townchats took place virtually every three to five months, since the first run in March 2020.

The regular engagement deepened employees' trust in leaders and this manifested in the annual employee engagement survey which saw an improvement of five percentage points. The high participation rate of 97% also reflected employees' continued commitment and passion despite the aviation downturn.

More emphasis was also placed on employees' well-being, with new areas such as financial health incorporated. In addition, CAG stepped up its Healthy Habits, Happy Life activities by converting 24 initiatives to virtual platforms at zero cost. These activities garnered a record high of 837 participants over six months.

Supporting leadership development

CAG believes that leadership in the company exists at all levels. The CAG Leadership Principles were formulated to guide employees

on their leadership development journey and serve as a lynchpin to achieve organisational goals.

A three-day virtual Learning Festival themed "Be a CAG Leader" was held in November 2020 to help employees translate these principles into their daily work. A 180-degree feedback exercise was also rolled out for people managers to enable them to gain insights into their leadership.

Giving back to the community

The pandemic might have decimated air travel, but the spirit of volunteering continued to fly high in CAG. Changi Foundation, the Group's philanthropic arm, continued to complement NorthLight and Metta School's curriculum in developing work readiness and independent living skills for the students.

Over 220 Northlight students were given an appreciation of various vocations in Changi Airport and what working in the customer service field is like through two in-house programmes – the e-Youth Passport Programme and the e-Career Development workshop.

A new Telemedicine Consultation programme was organised in partnership with Raffles Medical Group. More than 30 CAG employees roleplayed as nurses and doctors over multiple sessions and guided 13 Metta School students through the virtual consultation process.

An art appreciation programme was also curated by a CAG employee from the Design Management team for special needs resident artists from

Metta Welfare Association. The programme leveraged different art installations in Changi Airport to create awareness of and exposure to different art forms for the artists.

In December 2020, CAG distributed food packs to families living in two rental blocks in Chai Chee. CAG employees donated 361 food packs, surpassing the target of 300 packs.

Employer brand recognition

During the year, CAG garnered three notable awards – Randstad Employer Brand Research Awards (second most attractive employer in Singapore), Singapore's 100 (S100) Leading Graduate Employers (winner in hospitality sector and second place in aviation sector) and the HR Excellence Awards – Excellence in Workplace Well-being (Bronze).

The Randstad awards recognise the most attractive employers in 34 markets across the globe. This is the seventh consecutive year that CAG was ranked among the top three most attractive employers in Singapore.

The S100 Leading Graduate Employers ranking is the largest and longest-running study on graduate recruitment trends in Singapore. CAG clinched the accolades in a survey of some 14,000 undergraduates and recent graduates.

The 2020 HR Excellence Awards honours distinguished organisations in Asia with exceptional employee management programmes and robust HR strategy.

Engaging Fans Around the World

Changi Airport has constantly been growing its online community by engaging local and global fans through fresh and exciting social content to fuel their wanderlust. However, when the Covid-19 pandemic struck and kept travellers grounded worldwide, CAG had to review Changi Airport's content strategy to continue to maintain a close connection with its fans and followers.

During the year, CAG actively engaged fans to keep Changi Airport in the hearts and minds of travellers around the world by tailoring relevant content to keep them up-to-date with the latest travel news and events happening at Changi Airport.

Despite difficult times, Changi Airport maintained its position as the world's most followed airport. Fanbase on Changi's social platforms grew modestly to more than 4.8 million fans on Facebook and over 360,000 followers on Instagram.



Informing and reassuring

The volatile pandemic situation has created much uncertainty for travellers due to the different entry requirements imposed on passengers, depending on the risk level of the countries they were arriving from. At Changi, new

travel processes were introduced and trialled to facilitate these requirements and safeguard the well-being of travellers, visitors and airport workers. To alleviate travel stress and help travellers navigate through these new processes and requirements, CAG ensured that the latest and most accurate travel information was available on the Covid-19 Info Hub on changiairport.com and Changi Airport's social media platforms. The MAX chatbot feature on the Changi Airport website and iChangi app was also updated regularly to provide accurate information and live support to travellers who needed assistance.

Promoting local tourism

Changi Airport also leveraged social media to nudge Singapore residents to explore and enjoy their very own sunny island. Articles on CAG's travel blog, NowBoarding, provided recommendations on things to do, eat and see in Singapore, Jewel Changi Airport, and the Changi Precinct as part of efforts to promote local experiences.

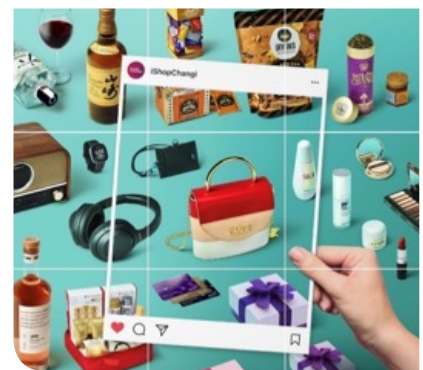
With international travel curbs in place, CAG's e-commerce businesses such as iShopChangi and Changi Eats are vital to Changi Airport's bottom line. To support these businesses, social media channels were used widely to publicise products on sale, flash deals, thematic events, as well as product and brand launches with higher frequency.

Expanding Changi Airport's social presence

The shift towards greater online content consumption during the pandemic also resulted in CAG expanding its social media platforms to reach out to a wider

audience, including business stakeholders.

A Changi Air Hub showcase page on LinkedIn was introduced, as an extension to CAG's corporate page, to share tailored content and raise brand awareness among airline and trade partners in the aviation industry. The platform has enabled the Air Hub team to have more interactions with partners, given that it was challenging to meet face-to-face in the pandemic situation. It has also allowed CAG to maintain and cultivate relationships for long-term strategic partnerships.



iShopChangi

As a result of travel curbs due to Covid-19, iShopChangi has had to pivot its business to target local residents. In a highly competitive online shopping landscape, it needed to engage locals more regularly to keep awareness high. Hence, dedicated iShopChangi Facebook and Instagram pages were launched to better target audiences with more retail-focused content such as sales, promotions and product launches.

As Changi Airport continues to adapt its operations and business during this pandemic, its social media platforms will remain as crucial channels for it to connect with its global audiences and keep their passion for Changi high.