

# RISING UP

Annual Report  
2021 — 2022

# — TO A NEW DAWN —





Into the second year of the Covid-19 pandemic, Changi Airport Group (CAG) continued to demonstrate its resilience amid a challenging operating environment. While Changi Airport's passenger traffic has not fully recovered to pre-pandemic levels, an encouraging increase in passenger numbers, signalling the first signs of travel recovery, could be seen towards the end of the financial year. From swiftly adopting new protocols to ensure the safety of airport users and staff to supporting the reopening of travel through Vaccinated Travel Lanes, CAG held fast to its mission of helping Singapore stay connected to the world safely.

CAG also continued to prioritise passenger experience and operational efficiency by deploying automated airport processes and innovative technologies. To serve customers holistically, airport retail spaces were refreshed and a stronger omnichannel presence was created to extend the convenience of shopping to travellers and non-travellers. Together with its airport community partners, CAG continued to deliver a safe, pleasant and efficient airport experience, while facilitating the smooth flow of global supplies through the Changi cargo hub.

As Singapore progressively relaxed its Covid-19 measures and further expanded air travel with the Vaccinated Travel Framework from April 2022, CAG worked assiduously with its airport partners to ramp up resources and capacity handling to meet the growing demand. Although global air travel may continue to be marked by uncertainty in the near term as countries adopt different Covid-19 strategies, CAG's ability and agility to adapt and innovate will help Changi Airport rebuild its position as a leading air hub. Changi Airport stands ready to rise up to a new dawn.

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## VISION

To be a first-in-class, leading global aviation hub run by exceptional people, connecting lives and businesses, contributing to the economic growth of Singapore.

## MISSION

To be a global leading airport company, anchored in the heart of Asia, pioneering safe, secure, sustainable and vibrant air hubs, ready for our future.

## VALUES

Our values and culture guide us in everything we do. They are the foundation for our decisions and the heart of our organisation. Changi Airport Group is about world-class service, delivered through our passion and culture of excellence.

We value  
Our People

We lead in  
Our Business

Integrity and Service are at the Heart  
of everything we do

We are committed to  
Our Customers

We succeed with  
Our Partners







## CORPORATE PROFILE

Changi Airport Group (Singapore) Pte Ltd (CAG) was formed on 16 June 2009 and the corporatisation of Singapore Changi Airport (IATA: SIN, ICAO: WSSS) followed on 1 July 2009. As the company managing Changi Airport, CAG undertakes key functions focusing on airport operations and management, air hub development, commercial activities and airport emergency services. CAG also manages Seletar Airport (IATA: XSP, ICAO: WSSL) and through its subsidiary Changi Airports International, invests in and manages airports around the world.



# CHAIRMAN AND CEO MESSAGE

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**Buoyed by the VTLs and further relaxation of Covid-19 testing requirements, Changi Airport recorded 1.14 million passengers or 20% of its pre-Covid-19 passenger traffic in March 2022. This was the highest registered in two years.**

**Financial year 2021/22 continued to be turbulent as the aviation industry confronted new Covid-19 variants that kept the resumption of travel at bay. Changi Airport was not spared and the closure of our terminals and Jewel Changi Airport (Jewel) to the public for a short period showed that we could not be fully immune to the evolving virus, despite our best efforts.**

Though more countries took an endemic approach and borders around the world started to reopen in the later half of the financial year, business conditions remained challenging. The travelling public remained concerned about the risk of getting infected, with many put off by the hassle of travel restrictions and entry requirements imposed by countries.

As Singapore took the careful step to reopen progressively, starting with the launch of Vaccinated

Travel Lanes (VTL) from Brunei and Germany on 8 September 2021, sentiments towards travel improved. We saw more passengers at Changi Airport as the VTL programme was expanded to over 30 countries. Buoyed by the VTLs and further relaxation of Covid-19 testing requirements, Changi Airport recorded 1.14 million passengers or 20% of its pre-Covid-19 passenger traffic in March 2022. This was the highest registered in two years.

For the financial year, total passenger traffic through Changi Airport was 5.2 million, representing an increase of more than four times that of the previous year. Aircraft movements increased by 71% year-on-year and airfreight throughput recovered to pre-Covid levels.

Working closely with airline and other industry partners, Changi Airport Group (CAG) continued to rebuild Singapore's air connectivity by engaging them to resume air services as soon as the situation allowed. These efforts resulted in Changi Airport welcoming four new passenger airlines and one new freighter operator during the year. Changi Airport also restored its direct



city links to over 120, served by 80 airlines.

### Putting health and safety first

In terms of Changi Airport's operations, a priority for CAG has been the health and safety of passengers, visitors and airport workers. To ensure this, CAG approached the challenges of the evolving global pandemic situation with agility.

Following the emergence of a Covid-19 cluster at Changi Airport in May 2021, due to the spread of the more virulent Delta variant, new safety measures and protocols were swiftly implemented. A zonal concept was introduced, with the airport's terminals segregated into three zones based on the assessed risk of infection. Extra effort and considerations were put in to ensure sufficient equipment and welfare facilities in the different zones for those who worked there. Staff were tested regularly, and strict access controls were implemented between zones to prevent the spread of the virus. For over a quarter of the year, public access to Terminals 1 (T1) and 3 (T3) was restricted, and Jewel had to be closed for about a month. This allowed for deep cleaning as well

as mandatory Covid-19 tests for all airport workers, to quickly detect any potential Covid-19 cases, isolate and treat them.

CAG's ability to adapt quickly was again demonstrated when it had to step up the airport's enhanced safety measures and reinstate the Transit Holding Areas in December 2021 as a surge in cases of the Omicron variant was reported around the world. As a result, we were still able to serve passengers travelling through Changi Airport, in a safe manner, during this period.

In support of Singapore's reopening plans, and in anticipation of higher passenger numbers, CAG also expanded the airport's on-arrival testing capabilities at T3. It onboarded new laboratory partners for PCR testing to augment processing capabilities and support the growing number of arriving travellers. These enhancements boosted Changi's readiness to manage travel recovery in the months to come.

### Refreshing our retail proposition

With tight travel restrictions and passenger numbers low, CAG continued to lend a hand to

its tenants with rebates, rental waivers, and prompt updates on the latest Covid-19 directives and developments. Training was also provided to upskill frontliners to help tenants with their manpower deployment.

CAG used the downtime to reinvigorate the retail experience at Changi Airport. Part of this was to redevelop the Central Piazza of T1 with the aim of providing passengers a refreshing and uplifting new experience. Leading luxury brands have since committed to taking the newly created anchor boutique spaces at this site, signalling their strong confidence in Changi as a best-in-class airport. On the landside, the north cluster of T3 Basement 2 was revitalised by converting two retail units into four open-concept food retail kiosks. This enhanced the marketability of the retail units located along the secondary thoroughfare and should improve long-term rental yield.

To generate sales while passenger traffic was very low, CAG pivoted to focus on the non-traveller market, providing tenants with additional revenue channels as well as supporting them with innovative retail promotions. Many



# CHAIRMAN AND CEO MESSAGE

more tenants were onboarded onto iShopChangi (ISC) and the Shopping Concierge programme, where customers could, respectively, make their purchases on the e-commerce platform or chat with a shopping concierge to assist with their purchase.

To stimulate retail sales in the airport and Jewel, CAG launched a new year-long marketing campaign – ‘Win With Changi’, providing shoppers with many prizes to win, including the grand prize of an all-electric Porsche Taycan.

For greater convenience to shoppers, we launched a mobile wallet, Changi Pay, in October 2021 with some 260 airport and Jewel tenants. With Changi Pay, users can pay, utilise vouchers and collect Changi Rewards points with just one scan of the merchant’s QR code, while earning their usual credit card benefits.

Over at Jewel, footfall continued to be adversely impacted by the entry restrictions in May/June 2021, tight safe management measures and the partial closure of Basement 1 for renovation works from January 2022. Nonetheless, the Jewel management team forged strategic partnerships to help profile Jewel to both local and regional audiences through events such as Mediacorp’s Star Awards 2021, Chingay 2022 as well as an episode of The Apprentice. Jewel also ran several novel promotions and activities, such as the Jewel-rassic Quest – a dinosaur-themed augmented reality game – to drive footfall and help tenants during a year of challenging operating conditions.

CAG’s wholly-owned subsidiary, Changi Travel Services (CTS), leveraged the higher passenger traffic from the VTIs by being the

go-to provider of Trace Together tokens for all incoming visitors. CTS also made its first foray into telecommunications and launched Changi Mobile in September 2021. This service garnered more than 10,000 subscribers within four months of its launch.

## Investing in the next phase of growth

Due to the low passenger traffic, CAG suspended operations at Terminal 2 (T2) in May 2020 and had used the past two years to drive expansion and refurbishment works in the terminal. The terminal will reopen progressively from May 2022 and when works are completed, it will be able to handle 28 million passenger movements per annum, making it Changi’s largest terminal, in terms of handling capacity.

On the airport airside, CAG continues to pursue the use of technology, including automation and robotics, to enhance operations and optimise the use of manpower. As an example, following a successful trial to use autonomous guided vehicles to transport baggage, the concept of operations was redesigned to support live flights. This was completed in December 2021 with a fleet of self-driven tractors used during peak periods.

While the Singapore government had paused the development of Terminal 5 (T5) in mid-2020 for two years, other works in the Changi East project continued. These included infrastructure upgrades to prepare for a three-runway system and the construction of tunnels, to facilitate the movement of airside vehicles and to connect T5 to T2. The government has since announced the resumption of the T5 project and we will work closely with our partners to fine-

tune the design and plan for the commencement of construction.

## Fortifying our financial foundation

For 2021/22, the Group’s revenue rose by 35% to S\$944 million due to stronger performance from airport service-related fees arising from the partial recovery of traffic at Changi Airport. With stronger revenue, financial discipline and continued government support, the Group reduced its cash burn and achieved a positive EBITDA of S\$232 million.

During the financial year, the business and economic environment in Brazil continued to remain challenging. Despite short-term support from the Brazilian government, the country’s deep economic recession, coupled with the global Covid-19 pandemic, had made it untenable for the Group to continue to operate Tom Jobim International Airport under the terms of the existing concession agreement. As a result, the Group filed for a re-auction of the concession in February 2022. Subsequent to this, the Group deconsolidated Concessionária Aeroporto Rio de Janeiro as a subsidiary and recognised it as an equity-accounted investee. Arising from this, the Group recorded a deconsolidation loss of S\$128 million in 2021/22, reflecting a reclassification of foreign currency translation reserve to the profit and loss statement. Until a new operator is selected, the Group will continue to manage the airport.

As a result of the conflict between the Russian Federation and Ukraine, the Group has had practical difficulties participating in its Russia investments’ financial and operational activities. Due to the uncertainty as well as disruptions to airport operations, the Group recorded a full write-down of S\$201 million relating to its investments in Russia.



Overall, the Group's net loss attributable to CAG's shareholder narrowed to S\$838 million, an improvement compared to the previous year's net loss of S\$954 million. As at 31 March 2022, total equity attributable to shareholder of the Company was S\$6.2 billion, reflecting a decline of 10% due mainly to the net loss suffered in 2021/22.

To further strengthen its liquidity position, CAG raised a total of S\$750 million through bond issuances during the financial year. A revolving credit facility of S\$2 billion was also secured to serve as a standby source of liquidity. As at 31 March 2022, the liquidity position of the Group remained healthy with cash and marketable securities totalling S\$1.9 billion.

### Growing and attracting an innovative workforce

Through the uncertain business environment, CAG continued to foster an internal culture of innovation and develop the company as an employer of choice. This included opportunities for employees to upskill themselves for a digital future as well as the introduction of flexible work arrangements to enable staff to better balance their work and home lives. CAG also restored pay cuts for most employees and lifted a hiring freeze for critical positions in 2021/22 to retain its talents. To encourage innovation at speed and at scale, as well as attract diverse talents from the digital and technology sectors, new initiatives to drive innovation efforts and establish new consumer and passenger experiences at Changi were established. One such initiative was the CAG Accelerator that enables employees to tap an internal network of consultants to sharpen problem statements and design solution approaches. Launched in June 2021, the Accelerator also connected these

innovators with CAG resources, including our various centres of excellence, to turn ideas into solutions.

### Building our community as a pillar of strength

The strength of the Changi air hub lies in its community of partners. This community demonstrated close coordination, resilience and agility to respond swiftly to the numerous challenges that arose from the Covid-19 pandemic, including changes to travel processes and safety measures. CAG has not taken this collaborative spirit for granted. In January 2022, the annual ONE Changi Appreciation event was held, and 31 awards were presented to airport partners and staff to celebrate and honour their outstanding efforts.

As a community, we were especially appreciative of the goodwill donations that were organised by airport partners, schools, private companies and government agencies, to thank airport staff for working through the pandemic to safely keep Singapore's borders open.

As part of the Care@Changi programme, over 300 frontline workers were trained to be able to identify and assist passengers with special needs more effectively. In August 2021, a Memorandum of Understanding was signed with Changi General Hospital to focus on initiatives to improve the well-being of travellers as well as the vibrance and health of the airport ecosystem.

### Preparing for travel recovery

With the opening of Singapore's borders to all fully vaccinated passengers since April 2022, we can expect air passenger numbers to rise significantly in the coming months. However, a weakening

global economic environment and geopolitical tensions may yet dampen the recovery.

Our journey forward will require close coordination and agile adaptation across all sections of the airport community to overcome whatever challenges that may come our way, including operational disruptions which have affected many airports due to manpower and capacity dislocations.

As we look to the year ahead with optimism, we want to thank the Singapore government, its agencies and our shareholder for their unwavering support of the aviation community. We also thank our Board Directors for their collective wisdom and judicious advice to the Group. We extend our appreciation to outgoing Board members Lim Zhi Jian and Mike Barclay for their contributions over the years and welcome Titus Lee to the Board.

We are especially grateful to our airport partners for staying the course with us this past year. It was the cohesiveness of the ONE Changi community and our airline partners that saw us through these worst of times, and this same Changi spirit will help us emerge stronger as travel revives.

With signs of a strong travel recovery already evident, CAG will continue to work closely with the aviation community and government agencies to further strengthen Changi Airport's connectivity and secure Singapore's position as a leading air hub as we prepare for long-term sustainable growth.

**Tan Gee Paw**  
Chairman

**Lee Seow Hiang**  
Chief Executive Officer

# FINANCIAL REVIEW

## Financial Highlights

	FY17/18	FY18/19	FY19/20 <sup>2</sup>	FY20/21	FY21/22
<b>Profit &amp; Loss (S\$'mil)</b>					
Total revenue	2,602	3,040	3,119	697	944
Total expenses	1,649	2,120	2,252	1,433	1,526
EBITDA <sup>1</sup>	1,310	1,466	1,637	178	232
Profit/(Loss) attributable to shareholder of the Company	849	677	438	(954)	(838)
<b>Financial Position (S\$'mil)</b>					
Assets	14,894	15,108	15,948	15,301	12,750
Liabilities	6,457	6,647	7,818	8,469	6,628
Cash and marketable securities	2,164	1,866	2,528	1,815	1,888
Loans and borrowings	1,332	1,652	1,803	1,837	2,016
Equity attributable to shareholder of the Company	7,600	7,839	7,887	6,916	6,218
<b>Financial Ratios</b>					
EBITDA margin	50.3%	48.2%	52.5%	25.5%	24.6%
NPAT margin	32.1%	18.9%	4.8%	n.m.	n.m.
Return on equity	11.6%	8.8%	5.6%	-12.9%	-12.8%

<sup>1</sup> EBITDA (Earnings before interest, taxes, depreciation and amortisation) include Covid-19 grants received from government authorities amounting to S\$98 million (FY2020/21: S\$218 million).

<sup>2</sup> The Group had adopted Singapore Financial Reporting Standards (International) ("SFRS(I)") with effect from 1 April 2019. In accordance with the transition requirements, FY19/20 comparatives and balances as at 31 March 2020 have been restated.

n.m.: Not meaningful







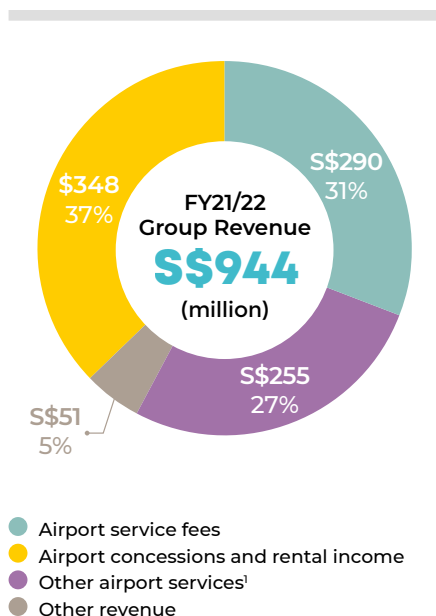
# FINANCIAL REVIEW

## GROUP OPERATING REVENUE

Changi Airport Group (Singapore) Pte Ltd (CAG) and its subsidiaries (the Group) registered a 35% increase in operating revenue to S\$944 million in financial year 2021/22 due mainly to higher passenger traffic at Changi Airport.

With the launch of Vaccinated Travel Lanes (VTLs) from September 2021 and easing of travel restrictions in Singapore, Changi Airport began to see a modest resumption of flights in the later part of the financial year. By March 2022, passenger numbers had risen to 1.14 million or 20% of pre-Covid-19 levels, the airport's highest since the start of the pandemic. For the whole of 2021/22, passenger traffic was 5.2 million. This was 8% of pre-Covid-19 level, but more than four times that of the previous financial year. CAG also continued to work closely with airline partners to expand their freighter operations and extend passenger freighter flights to handle higher cargo throughput, which had recovered to pre-pandemic levels. Together, the improvements in passenger traffic and cargo throughput contributed to a year-on-year (y-o-y) growth in airport service fees and other airport services by 70% to S\$545 million.

Throughout the financial year, the Group continued to extend support to airport partners and tenants through various government assistance schemes and rental waivers as the travel retail landscape continued to be challenging due to the low passenger traffic. This caused the recovery of airport concessions and rental income to be relatively subdued with a y-o-y improvement of 14% to S\$348 million. However,



the unwavering support was reassuring to tenants and enabled CAG to secure new leases with key concessions such as Gucci, Hugo Boss, Montblanc, Prada, Rimowa and Saint Laurent.

## GROUP EXPENDITURE

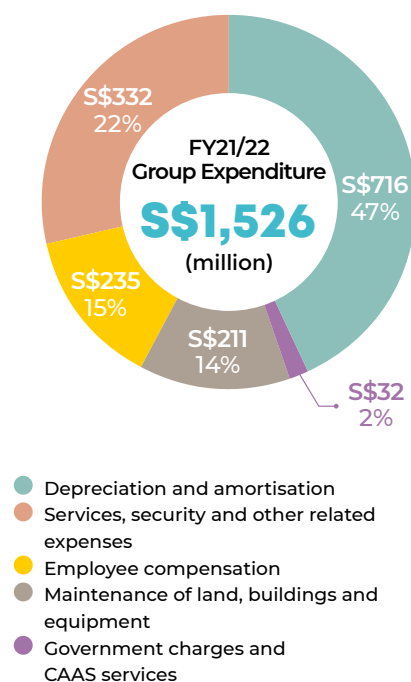
Due to the Group's significant capital investments, almost half of the Group's expenditure comprised depreciation and amortisation charges.

Excluding depreciation and amortisation charges of S\$716 million, the Group incurred operating expenses (Opex) of S\$810 million. Continued efforts on cost control and support from the Singapore government enabled the Group to maintain its Opex at approximately half of pre-Covid-19 levels. Compared to the previous financial year, Opex increased by

10% due mainly to costs incurred for the implementation of safe travel measures and partial restoration of salary cuts by CAG as part of staff retention measures.

Despite the disruptions caused by Covid-19, the Group remained committed to the safety of its passengers, visitors and airport workers. At Changi Airport, the cleaning of airport terminals was intensified and risk-based measures were adopted to segregate and protect passengers. Steps were also taken to ensure the safety of airport workers, including the segregation, vaccination, and regular testing of frontline staff.

During the financial year, operations at Terminal 2 (T2) and Terminal 4 (T4) continued to be suspended to allow CAG to keep its operating costs low. To support travel recovery, T2 and T4 will progressively reopen in tandem





with expected higher passenger traffic in the later part of 2022.

### EBITDA

With higher revenue, tight cost controls and continued government support, the Group achieved a positive EBITDA of S\$232 million in 2021/22, a 30% improvement compared to the previous year.

### LOSS ON DECONSOLIDATION AND WRITE-DOWN OF INVESTMENTS

During the year, the business and economic environment in Brazil continued to remain challenging. Despite short-term support from the Brazilian government, Brazil's deep economic recession, coupled with the Covid-19 pandemic, had made it untenable for the Group to continue to operate Tom Jobim International Airport under the terms of the existing concession agreement. As a result, the Group filed for a re-auction of the concession in February 2022. As at 31 March 2022, the Group deconsolidated Concessionária Aeroporto Rio de Janeiro (CARJ) as a subsidiary and recognised CARJ as an equity-accounted investee. Arising from this, the Group recorded a deconsolidation loss of S\$128 million, reflecting a reclassification of foreign currency translation reserve to the profit and loss statement in 2021/22.

Due to the current conflict between the Russian Federation and Ukraine, the Group has practical difficulties participating in its Russia investments' financial and operational activities. Owing to the uncertainty as well as disruptions to airport operations, the Group recorded a full write-

down of S\$201 million relating to its investments in Russia.

The above-mentioned events are non-cash in nature.

### NET LOSS

Including the deconsolidation loss and write-down of investments in Russia, the Group recorded a net loss attributable to shareholder of the Company (net loss) of S\$838 million.

### FINANCIAL POSITION

The Group's asset base as at 31 March 2022 remained strong at S\$12.8 billion, of which 73% comprised property, plant and equipment and investment property. Compared to the previous financial year, the Group's assets reduced by S\$2.6 billion due to the deconsolidation of CARJ as explained above.

Tight cost control and support from the Singapore government helped the Group contain its cash burn during the financial year. To further strengthen its liquidity position, CAG raised a total of S\$750 million through bond issuances. A revolving credit facility of S\$2 billion was also secured to serve as a standby source of liquidity. As at 31 March 2022, the liquidity position of the Group remained healthy with cash and marketable securities totalling S\$1.9 billion. Total outstanding loans and borrowings amounted to S\$2 billion, all of which is not due for repayment within the following 12 months.

As of 31 March 2022, the Group shareholder's equity was S\$6.2 billion, reflecting a decline of 10%

from 31 March 2021, due mainly to the net loss suffered during the financial year.

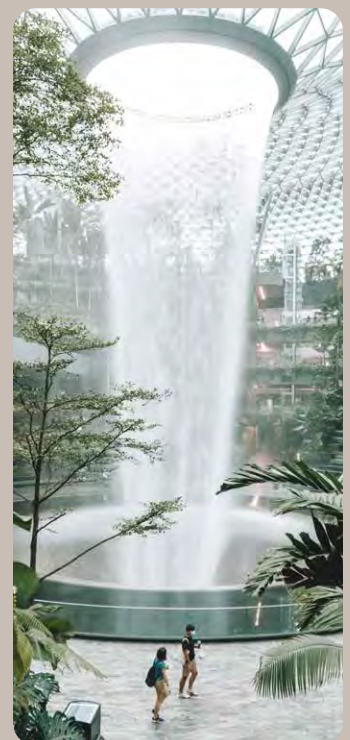
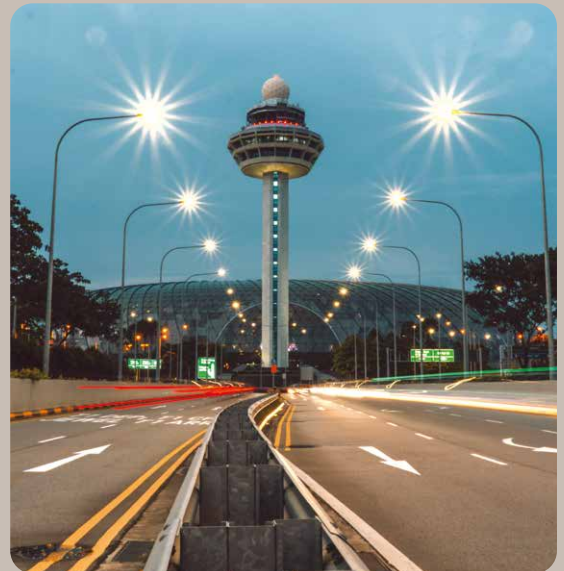
### OUTLOOK

With the gradual easing of travel restrictions by the Singapore government since end March 2022 and the reopening of many international borders, the recovery of passenger traffic is expected to gain momentum. The southern wing of T2 was partially reopened in May 2022 to handle arrival operations, and departure operations in this wing will also resume in October 2022. In the meantime, expansion and upgrading works in T2's northern wing will continue. T4, which had been closed since May 2020, is slated to reopen in September 2022 to cater to the steady recovery of passenger traffic. Development works for Terminal 5 have also resumed after a pause of two years for the terminal to be ready in the mid-2030s to meet the anticipated demand then.

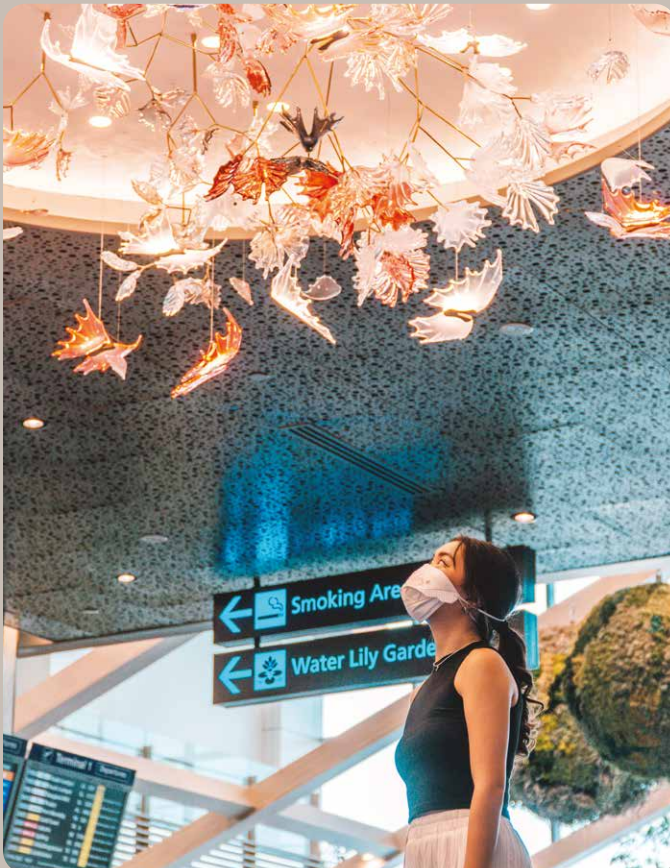
Despite the positive developments since the beginning of 2022, there may still be headwinds ahead. The global economic environment and geopolitical tensions may dampen aviation's pace of recovery. With rising energy costs, manpower constraints and supply chain disruptions, CAG expects to face challenges and cost pressures as it ramps up operations. It will continue to exercise financial prudence and work closely with the aviation community and government agencies to secure Singapore's position as a leading air hub as it forges ahead to achieve long-term sustainable growth.



# BUSINESS AND OPERATIONS REVIEW







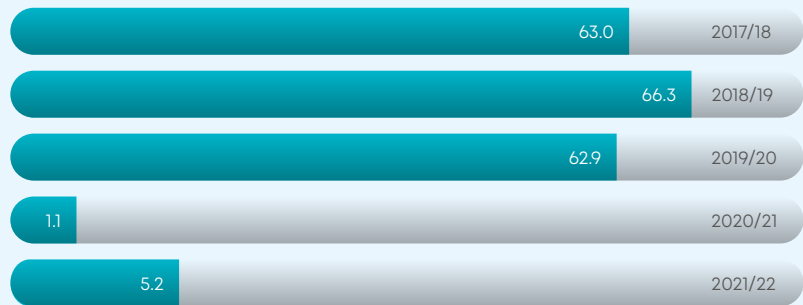
# AIR TRAFFIC STATISTICS

## PASSENGER MOVEMENTS

5.2M



IN MILLIONS

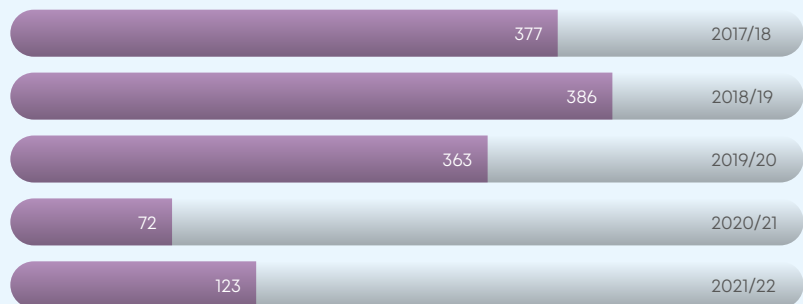


## COMMERCIAL AIRCRAFT MOVEMENTS

122,786

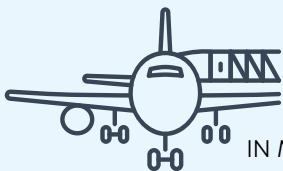


IN THOUSANDS

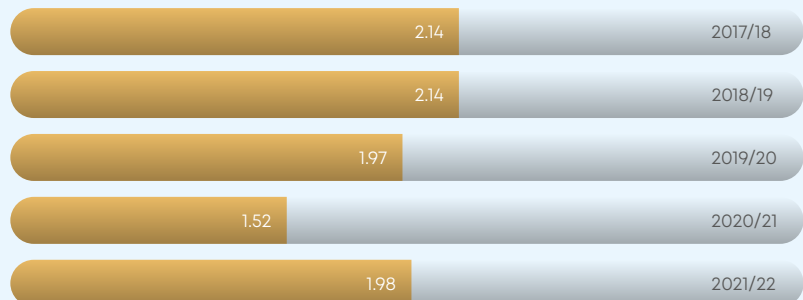


## AIRFREIGHT THROUGHPUT (TONNES OF AIRFREIGHT)

1.98M



IN MILLIONS





# REBUILDING SINGAPORE'S CONNECTIVITY TO THE WORLD

In financial year 2021/22, Changi Airport saw some recovery of passenger traffic, buoyed by the reopening of international borders in many parts of the world and the launch of Vaccinated Travel Lanes (VTLs) by the Singapore government from September 2021. The year ended with 5.2 million passengers served at Changi, more than four times the traffic of the previous year. Aircraft movements grew 71% year-on-year and airfreight throughput recovered to pre-Covid levels.

In March 2022, Changi Airport handled 1.14 million passenger movements, crossing the one-million mark for the first time since March 2020. However, the lasting impact of Covid-19 continued to plague full travel recovery, with the number of passengers for the month being just one-fifth of pre-pandemic days in March 2019.

## Maintaining air travel despite Covid-19 occurrence in the airport

In May 2021, following the emergence of the more virulent

Delta variant of the Covid-19 virus and the subsequent detection of positive cases in the airport community, CAG temporarily restricted public access to its passenger terminal buildings and closed Jewel Changi Airport (Jewel) to safeguard public health.

The unprecedented move allowed time for all airport workers to undergo mandatory Covid-19 tests in a special testing operation to quickly detect, isolate and treat any potential Covid-19 cases in the airport community, and to deep-clean Changi Airport's terminals and Jewel for additional safety. It also gave time for airport workers to be briefed and trained on the new safety requirements and protocols, and for such new measures, including a new zonal concept of operations, to be rolled out smoothly. During this period, Changi Airport remained open for air travel to and from Singapore and continued to serve transfer and transit passengers in a safe manner with dedicated Transit Holding Areas.

## Supporting the reopening of Singapore through VTLs

With new safety protocols in place and no new positive cases detected among airport workers, Jewel reopened its doors to the public in June 2021 after more than a month of closure. Terminal 1 (T1) and Terminal 3 (T3) were also reopened to the public on 1 September 2021 with additional safeguards to protect travellers, airport workers and visitors. On 8 September 2021, Singapore launched its first VTLs with Brunei and Germany, allowing fully vaccinated travellers on designated flights from both destinations to enter Singapore without the need to quarantine. The promise of quarantine-free travel attracted more traffic to Changi Airport as airlines reinstated flights to and from Singapore.

To support the Singapore government in its efforts to reopen borders in a safe manner, CAG conducted a series of briefings to the travel trade overseas and in Singapore, including travel agents and tour operators, to update them of the latest entry requirements under VTL arrangements. These sessions provided important and up-to-date information on the on-arrival process and experience that travellers could look forward to at Changi Airport.

With the progressive reopening of borders through VTLs, CAG launched a tripartite campaign with Singapore Airlines and the Singapore Tourism Board (STB) from October 2021, titled 'Welcome Back to Singapore', to spur travel to Singapore. The campaign video garnered over 1.3 million views in the first month of its release.



>> The return of Gulf Air in April 2021 created a new city link to Bahrain and enhanced Changi's connectivity with the Middle East.

# REBUILDING SINGAPORE'S CONNECTIVITY TO THE WORLD

## Welcoming new airlines and city links

Throughout the year, CAG worked closely with airlines to restore Changi's connectivity and rebuild its air hub status. Amid the challenge of the ongoing pandemic, Changi Airport welcomed four new passenger airlines, namely, Gulf Air in April 2021, STARLUX and ZIPAIR in September 2021, and HK Express in February 2022. The return of Gulf Air, the flag carrier of the Kingdom of Bahrain, added a new city link and bolstered Changi's connectivity with the Middle East. Similarly, the resumption of the Singapore-Vancouver route by Singapore Airlines reinstated Changi's direct connectivity to Canada after a 12-year hiatus, and put Changi's connectivity to North America in a stronger position than it was before the pandemic.

In December 2021, Air Premia, a new start-up hybrid service carrier from South Korea, also launched a once-weekly Seoul Incheon-Singapore service with Passenger Aircraft for Cargo Conveyance only (PACC) operations, with Singapore being its first international destination. The airline had since scaled up to thrice-weekly services, with plans to convert its PACC operations to passenger service.

By March 2022, Changi had restored its connectivity to over 120 city links, served by more than 80 airlines. This was supported by the VTL arrangements which had been extended to over 30 countries, including Changi's key passenger markets, such as Australia, India, Indonesia and Malaysia. To celebrate the launch of the respective VTLs, CAG organised a series of 'Welcome Back' events



>> The Changi air cargo hub continued to play its part to distribute Covid-19 vaccines to Singapore and the region.

for crew and gave out souvenirs to passengers upon arrival.

## Growing Changi's cargo network

Air cargo continued to be a bright spot as Changi Airport remained steadfast in its mission to facilitate global trade and support the flow of essential goods, including medical supplies, into Singapore and onwards to the surrounding region.

CAG continued to work closely with airline partners to expand their freighter operations and extend passenger freighter flights. As of March 2022, cargo flight movement, including PACC flights, had more than doubled compared to the same month in 2019. As cross-border e-commerce continued to accelerate, CAG facilitated the network expansion of global express integrators, namely DHL Express and FedEx Express, to meet the demand for quick and reliable cargo shipments. In June 2021, Changi Airport welcomed a new freighter operator, Tasman

Cargo Airlines from Australia. Tasman Cargo Airlines' cargo capacity was chartered by DHL Express to cater to the rise in e-commerce cargo flows between Europe and Southwest Pacific. It also supplemented DHL's intercontinental network expansion at the Singapore hub with other freighter operators, such as AeroLogic and Kalitta Air.

During the year, CAG also retained passenger airlines' mindshare of Changi Airport by facilitating PACC flights, such as Ethiopian Airlines, Fiji Airways, Garuda, Hong Kong Airlines, Saudia Cargo and SriLankan Airlines. This boosted Changi's cargo capacity and enhanced Singapore's position as an important logistics hub.

## Developing top-class cold chain capabilities

CAG continued to enhance Changi air cargo hub's cold chain handling capabilities through community collaboration. With the rise in global vaccination rates and demand for Covid-19 boosters,



the Changi air cargo hub, being the first and largest IATA CEIV Pharma<sup>1</sup> certified community in the Asia-Pacific, kept to its role of protecting public health with the safe, reliable and effective delivery of Covid-19 vaccines into Singapore, and beyond to Southeast Asia and Southwest Pacific.

Changi Airport also formed the first IATA CEIV Fresh<sup>2</sup> certified community in Southeast Asia with Singapore Airlines, SATS and dnata Singapore. It was a testament that the Changi air cargo hub community had met the highest industry standards on handling perishables through extensive airport cold chain infrastructure and trained specialists. With this achievement, Changi, being strategically located at the crossroads of major perishables production and consumption markets, was well-poised to facilitate perishables trade flows to and from Asia-Pacific.

In 2021/22, Changi Airport won three international awards in the air cargo category: Highly Commended Cargo Hub of the Year at the Air Cargo News Awards 2021, Asia Pacific Airport of the Year 2021 at the 8th edition of Payload Asia Awards, and Best Airport in Asia (over 1 million tonnes) at the 2021 Asian Freight, Logistics and Supply Chain Awards. The accolades were a recognition of Changi's continual commitment to being a leading air cargo hub serving Singapore and the region.

### Continual engagement with trade partners

CAG continued to engage its global network of travel agents through Changi Travel Circle (CTC), a digital business-to-business platform, to maintain top-of-mind awareness for Singapore, Changi Airport and Jewel. By March 2022, CTC had more than 1,500 overseas travel agents across 44 countries

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**By March 2022, Changi had restored its connectivity to over 120 city links, served by more than 80 airlines.**

and 45 Singapore destination management companies as programme members and partners, respectively. Besides updating the community on the latest travel requirements into Singapore, CTC showcased novel and unique Singapore tour products and offerings over the course of the pandemic.

CAG also worked with various stakeholders, including STB, to strengthen Singapore's appeal and domestic tourism by raising the awareness and attractiveness of Changi Precinct – a unique district in the eastern end of Singapore,

which includes Changi Airport, Jewel and its surrounding areas such as Bedok, Tampines and Pulau Ubin. Through new tourism products, such as forest bathing in Jewel's Shiseido Forest Valley and cycling tours from East Coast Park, CAG injected vibrancy to the Changi Precinct and attracted more footfall to its terminals and Jewel.

### Further easing of air travel restrictions to drive recovery

On 24 March 2022, the Singapore government took a decisive step to further ease Covid-19 travel restrictions and fully reopen its borders to the world. The new Vaccinated Travel Framework (VTF), effective 1 April 2022, replaced all existing VTL and unilateral opening arrangements and allowed fully vaccinated travellers to enter Singapore quarantine-free. Covid-19 testing requirements for fully vaccinated travellers were streamlined with the removal of on-arrival tests. On 26 April 2022, the need for pre-departure tests prior to entering Singapore was also lifted. The removal of impediments to travel while still safeguarding public health was a major leap forward. It boded well for traffic recovery as CAG stepped up to reclaim Changi Airport's status as an international aviation hub.



>> New tourism and wellness products, such as forest bathing in Jewel, enriched the appeal of the Changi Precinct for domestic and international visitors.

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

<sup>2</sup> CEIV Fresh, or the Center of Excellence for Independent Validators in Perishable Logistics.

# DELIVERING THE PROMISE OF SERVICE EXCELLENCE

CAG remained committed to delivering the best airport experience at Changi despite challenges posed by the Covid-19 situation. On top of maintaining a clean and safe airport environment, the Group was agile in responding to changes in air travel processes and safety measures arising from the global pandemic. All these were done to ensure that airport visitors and passengers continued to be served in a safe, efficient, and comfortable manner.

Changi Airport was named the World's Best Airport in the 10 to 15 million passengers category in the Airports Council International's (ACI) Airport Service Quality surveys. It also won the World's Best Airport Staff and Best Airport Staff in Asia awards, a testament to its dedication to service excellence despite a difficult operating environment. Changi successfully renewed its accreditation under ACI's Airport Health Accreditation Programme, demonstrating that the health measures put in place at the airport were aligned with industry best practices.

## Acting swiftly to safeguard public health

Since the start of the Covid-19 pandemic, CAG had implemented new safety measures and intensified the cleaning of airport terminals to protect the health of passengers, airport users and workers. Working alongside the Singapore government, a risk-based approach was adopted – arriving passengers were segregated and handled according to the government's prevailing risk assessment of the countries where they came from. Risk-based measures were similarly put in place to protect airport workers.



>> CAG acted swiftly with a new zonal concept in May 2021 to reduce the risk of cross-infection between airport users and workers.

This included the vaccination and regular testing of frontline workers, as well as the use of the appropriate level of personal protective equipment (PPE).

To safeguard public health, CAG temporarily restricted access to the passenger terminal buildings and closed Jewel Changi Airport (Jewel) to the public in May 2021, when the more virulent Delta variant breached the defence of stringent safety protocols set in place by CAG to mitigate the risk of infection. With a number of Covid-positive cases among airport workers, the unprecedented entry restrictions allowed time for all airport workers to undergo mandatory Covid-19 tests in a special operation so that any potential Covid-19 cases could be quickly detected, traced, isolated and treated. The closure also enabled Changi Airport's terminals and Jewel to be deep-cleaned for enhanced safety.

## Preserving a safe travel environment for passengers and airport workers

During this period, Changi Airport remained open for flight operations to keep Singapore connected to the world.

To ensure a safe environment for all airport users and workers, CAG tightened its airport-wide infection prevention and control strategy in consultation with the Ministry of Health (MOH), the National Centre for Infectious Diseases, and the Civil Aviation Authority of Singapore. A new zonal concept was introduced to reduce the risk of virus transmission. The airport's terminals were segregated into three distinct zones.

Airport workers in Zone 1 (the highest-risk zone), which included the terminal piers, arrival immigration hall, and baggage



claim hall, were protected in the highest-level PPE and segregated from other workers throughout the duration of their shift. This group of workers had their own dining areas with individual seating, rest areas, reserved toilets, and dedicated PPE donning and doffing stations. Similarly, those working in Zone 2, comprising the departure immigration area and the central transit area, and Zone 3, comprising the public areas, where the risks of infection from arriving passengers were respectively lower, had to comply with the applicable safety requirements. Airport workers were given additional training on the proper use of PPE with regular audits and spot checks to ensure strict compliance. A new movement record system was also rolled out to maintain the integrity of zonal segregation.

To bring the risk of virus transmission to the lowest, the transit areas in Terminal 1 (T1) and Terminal 3 (T3) were further segregated with dedicated thoroughfares and facilities for arriving and departing passengers as well as airport workers to reduce cross-contact. As an added precautionary measure, passengers from very high-risk countries were escorted to the remote gates in Terminal 2 for immigration clearance and then transported by bus out of Changi Airport directly to their quarantine facility, without going through the operational terminals. Efforts were made to ensure that the passenger flow remained smooth and seamless, and the airport experience was not compromised even as safety measures were put in place.

As vaccination provided the individual with protection and lowered the risk of transmission, only fully vaccinated staff were rostered for duty in Zone 1. CAG also stepped up its testing regime for airport workers, with those working in higher-risk roles taking an additional Antigen Rapid Test

(ART) between their seven-day rostered routine tests. A new staff testing centre was set up within six days to conduct additional ART for the sizable group of airport workers. A daily rapid non-invasive test at the end of the shift was also given to Zone 1 workers for added peace of mind. CAG recognised the significant demands which the new zoning concept placed on the workers, especially those assigned to Zone 1, and worked closely with its airport partners and agencies to ensure that the workers' welfare was well taken care of.

With enhanced safety measures implemented to protect airport workers and visitors, Jewel reopened its doors to the public in June 2021. Changi's T1 and T3 followed in September 2021 with additional safeguards in place. For example, only professional meet-and-greet service personnel were allowed access into the arrival halls to serve arriving passengers, and a new dedicated dining area was also set up at T3 Basement 2 for airport workers to reduce their interaction with the public. The

air-conditioning and mechanical ventilation systems within the airport terminals were also upgraded for cleaner air quality.

### Facilitating the smooth launch of Vaccinated Travel Lanes

In September 2021, under the new Vaccinated Travel Lane (VTL) scheme, fully vaccinated travellers from a list of pre-approved countries could enter Singapore on VTL flights without the need for quarantine, greatly alleviating the cost and hassle of air travel. By March 2022, over 30 countries were approved under the VTL scheme, marking a step towards traffic restoration at Changi.

CAG fully supported the VTL scheme which allowed travel to resume in a calibrated manner. The Changi Testing Facility, managed by CAG, played a pivotal role as arriving passengers had to undergo on-arrival tests (OAT) in Changi. In anticipation of traffic recovery, the testing facility at T3 was expanded to increase its passenger handling capacity. CAG also onboarded new laboratory partners for the PCR



>> In-terminal safety protocols were gradually lifted in March 2022 to allow passengers and families to meet in the arrival hall.

# DELIVERING THE PROMISE OF SERVICE EXCELLENCE



>> CAG leveraged innovation, such as a new virtual Changi Experience Ambassador service, to assist passengers more effectively.

testing to augment processing capabilities and support the growing number of arriving travellers. These enhancements, coupled with CAG's Safe Travel Concierge, a web portal which allowed travellers to easily retrieve information on entry requirements and pre-book their OAT for a faster turnaround time, boosted Changi's readiness to manage travel recovery in the months to come.

At Changi, transfer and transit traffic continued to be a strategic segment vital for the air hub's growth. To ensure this group of passengers were well-served, CAG continued to operate the Transit Holding Areas (THA) that it had set up since June 2020. It regularly reviewed its approach in handling these passengers with regulatory and health agencies, in accordance with the evolving global Covid-19 situation and MOH's risk assessment. In November 2021, a breakthrough was achieved. Except for a small number of travellers from countries that were classified as higher risk, the THA handling was removed for all other transfer and transit passengers, so they

could once again enjoy the full suite of transit facilities. The THA was resized to free up gate capacity and ease manpower challenges on ground. Nevertheless, when CAG was tasked to reinstate the THA temporarily in December 2021 due to the surge in cases from the Omicron variant from several key European markets, CAG was able to respond quickly and restore the THA within a few days.

Having achieved success on the risk-based segregation approach in transit, a similar concept was rolled out to the arrival halls in October 2021, allowing meet-and-greet activities to resume at dedicated meeting points. In March 2022, in the first sign of return to normalcy for air travel, restrictions to the arrival halls were completely lifted, permitting arriving passengers to be welcomed by their family and friends freely.

With sufficient safeguards in place and in tandem with Singapore's move towards an endemic situation, staff zonal segregation was phased out gradually to ease manpower constraints.

The flexibility for staff movement and deployment allowed Changi to better serve its customers, especially with the increase in traffic.

On 24 March 2022, the Singapore government announced a further easing of Covid-19 travel restrictions to fully reopen its borders. A new Vaccinated Travel Framework effective from 1 April 2022 replaced all existing VTL and unilateral opening arrangements, allowing fully vaccinated travellers to enter Singapore quarantine-free. Covid-19 testing requirements for fully vaccinated travellers were also simplified with the removal of OAT. The need for pre-departure test prior to entry into Singapore was further lifted from 26 April 2022. CAG continued to adjust its airport protocols with agility to support travel recovery.

## Strengthening the Changi Experience

As travel began to recover, local residents remained the bulk of Changi Airport's visitors. CAG continued to strengthen the special bond between Changi and local residents with unique events to attract footfall. To celebrate year-end festivities, CAG hosted the Changi Festive Village for the second time and powered it up with more fun activities and shopping promotions, including a brand partnership with Tsum Tsum at T3. At Terminal 4 (T4), the Dino Carnival and Dino Bounce returned by popular demand, with more than 35 carnival game and food stalls, as well as fossil digging and ice-fishing activities. T4 also hosted Singapore's only indoor go-kart circuit within its departure hall, which proved to be a hit for over 13,000 thrill-seekers. For the first



time, T4 opened its transit area for 2,000 campers to stay overnight in glamping tents, with game booths and movie screening for a night of adventure at the airport.

Over at Changi Jurassic Mile, a 3.5-kilometre-long cycling and jogging path linking Changi Airport and East Coast Park, CAG collaborated with Sundown to organise the first virtual marathon at the airport. Visitors were awed by the first Changi Park Connector light-up featuring more than 10,000 LED tulips and sunflowers, as well as the new Changi Jurassic Arc, an outdoor garden with a 4-metre-tall Tyrannosaurus rex topiary and a 5-metre-tall animatronic Spinosaurus.

CAG, well-known for its generous usage of plants in its terminals, continued to open its nursery for public tours and plant sales. It tapped new avenues for its plant sales, such as the Changi GIFT shop.

#### Appreciating the ONE Changi airport community

CAG continued to recognise the contributions of the ONE Changi community, a key pillar of strength for the airport. More than 400 airport workers attended the annual ONE Changi Appreciation event held in January 2022 to celebrate and honour the achievements of the airport community. Thirty-

one awards were presented to airport partners and workers to thank them for partnering CAG in ensuring smooth and seamless operations at the airport during these challenging times.

Airport workers, especially those working in Zone 1, also received donations in the form of food, gift packs, and thank you cards, in appreciation of their hard work and sacrifice during the pandemic to keep Singapore's borders open safely. These donations were from airport partners, schools, private companies, government agencies as well as CAG. A total of 25 giveaways with over 61,000 items were organised during the year.

#### Developing new service initiatives and skillsets

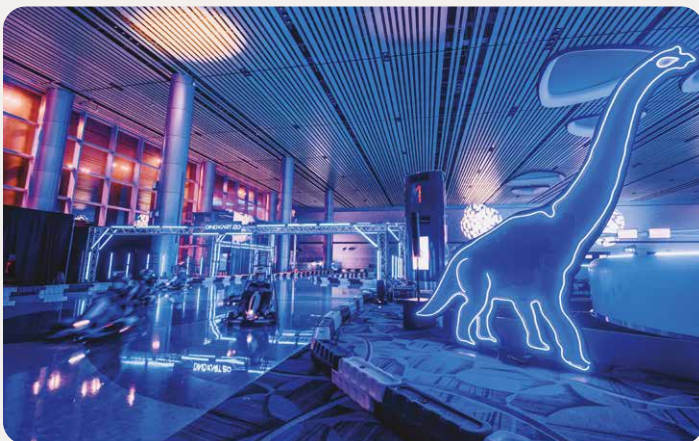
In September 2021, in a leap towards service innovation, CAG launched the virtual Changi Experience Ambassador (CEA) programme at key information counters. The new digital platform allowed the customer service team to serve passengers remotely while maintaining the human touch, especially for passengers with more complex issues to resolve. CEAs were trained in digital competencies to operate with this novel, integrated service approach.

The ONE Changi Learning Festival was also held virtually in March 2022 to promote learning and

foster greater collaboration between airport partners. Through webinars, panel discussions and virtual visits, participants gained new skills under three tenets – service in the new normal, understanding and appreciating disabled people needing assistance, and mental wellness.

To be a more inclusive airport, CAG launched three new initiatives under its Care@Changi programme to better support passengers with special needs, especially those with invisible disabilities. These included training over 300 frontline staff as Changi Care Ambassadors, and to identify such passengers more effectively by the special lanyards they wear. CAG partnered Rainbow Centre Training and Consultancy to develop the Changi Airport Social Story, a step-by-step guide to help such passengers through the airport processes.

In August 2021, CAG signed a memorandum of understanding with Changi General Hospital to focus on the well-being of travellers. The aim was to promote traveller wellness, introduce more comprehensive occupational health programmes for the airport community, exchange best practices, conduct research and innovate on emerging areas of concern to create a vibrant and healthy airport ecosystem.



>> For the second year running, CAG hosted the Changi Festive Village to celebrate year-end festivities with airport visitors.

# STAYING OPERATIONALLY READY

During the year, Changi Airport stayed open for flight operations to preserve Singapore's connectivity to the world and to keep the country's economy going, even as a slew of new health protocols were rolled out to combat the more transmissible Covid-19 variants. Besides strengthening Covid-19 protection measures in the airport's terminals, the safety of passengers on every flight handled continued to be of utmost importance. CAG enhanced its flight operations and airside functions with more efficient and innovative technologies, as it prepared for travel recovery.

## Strengthening emergency preparedness

Emergency preparedness remained a key priority for CAG. The Airport Emergency Service (AES) team partnered with key stakeholders to conduct two crash exercises during the year – Exercise Bear at Seletar Airport in

August 2021 and Exercise Bobcat at Changi Airport in October 2021. New technologies, such as firefighting robots, body-worn cameras, and autonomous stretcher to transport casualties, were trialled as part of the effort to future-proof Aircraft Rescue and Firefighting (ARFF) capabilities and airport operations. These exercises, organised with safe management measures in place, validated the ARFF capabilities of the AES team and ensured that the two airports stayed crisis ready for the safety of all airport users.

CAG also commissioned new aircraft rescue and firefighting water tenders during the year to bolster its firefighting capabilities. The new water tenders were equipped with larger foam and water tank capacities and more advanced firefighting features. To shorten response time, the runway emergency access roads at Changi and Seletar airports

were also operationalised in June 2021, allowing rescue vehicles to respond more quickly to aircraft incidents on and beyond the runway.

Emergency preparedness was strengthened with strategic partnerships. As part of the memorandum of understanding signed with Changi General Hospital (CGH) in August 2021, CAG and CGH shared best practices in crisis management workflow and tightened the interface between airport and hospital to better serve casualties from an aircraft accident.

To overcome network coverage challenges at sea, CAG also worked with Starhub, a network service provider, to conduct the first-ever sea trial using 5G network. With clearer and better-quality live feeds achieved from the sea to the AES command post on land in real time, decision-making and rescue efforts would now be more efficient.

With fewer flights during the year, firefighters from the AES team performed additional airside duties, such as wildlife dispersal and counter-drone operations, as part of the company's in-sourcing efforts to better manage cost and manpower.

## Engendering 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. For maintaining its safety record, Changi Airport achieved a deficiency-free rating by the International Federation of Air Line Pilots' Association



>> The Annual Airport Safety Awards recognised individuals and teams who embodied the culture of safety in their work.



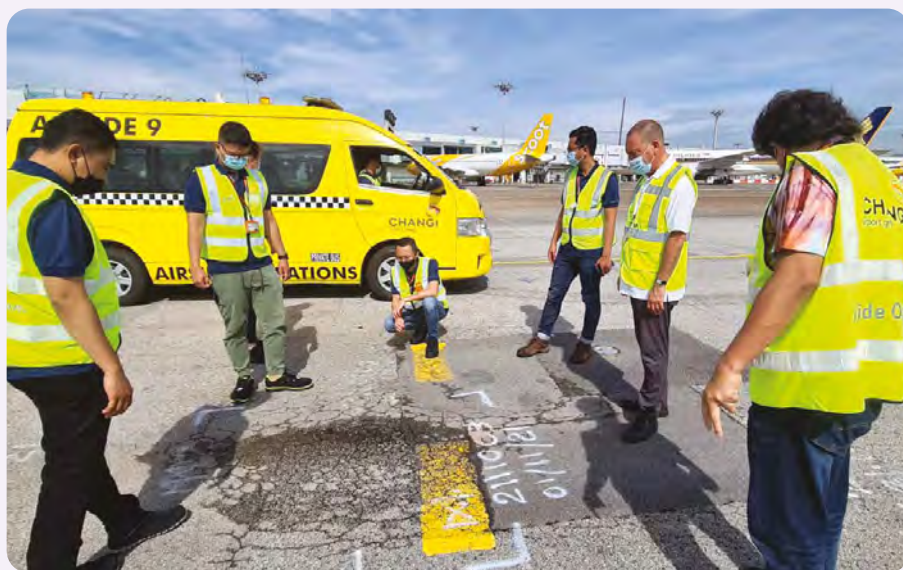
(IFALPA) for the 41<sup>st</sup> consecutive year since it opened in 1981.

CAG persevered in its efforts to build a culture of safety within the airport community. The Airport Safety Awards programme, in its fifth year, saw close to 400 staff being recognised for their outstanding acts of safety and safety-related innovation. The high participation and strong support from key airport partners were encouraging and signified a unanimous spirit in maintaining a culture of safety at Changi.

The Service Workforce Empowerment & Experience Transformation (SWEET) mobile app, which enables every staff in the airport community to report potential hazards, continued to be widely used. More than 1,000 cases were reported, reflecting the airport community's strong safety culture, and allowing potential hazards to be swiftly tackled through collective efforts.

To provide users with easy access to up-to-date safety manuals, CAG also modernised its library of safety-related publications with the launch of a mobile app. This greatly improved efficiency as staff could retrieve digital versions of the safety documents remotely and no longer needed to carry physical versions to work sites.

During the year, CAG worked closely with the Civil Aviation Authority of Singapore (CAAS) to ensure compliance with the regulator's Code of Practice for Terminal Safety. It successfully completed an audit in October 2021 to ascertain that proper safeguard was in place to protect persons and property within the airport terminals. It also successfully completed a biannual security audit held by the Airport Police Division between October and November 2021 with no



>> To be future ready, airside professionals were groomed to handle more complex airside operations in a special training programme.

findings, which attested that the airport's security protocols complied with international and local security regulations.

CAG also maintained its aerodrome certificate for Changi and Seletar Airports when it successfully completed CAAS' safety surveillance audits in March and November 2021, respectively, with no significant safety issues reported. Although many operational changes had to be undertaken in response to the pandemic, safety remained a top priority and CAG continued to meet all the requirements. CAG's focus on safety was also validated, when CAAS noted the progress made by CAG in safety management during the safety management system assessment conducted by CAAS in July 2021.

#### Ensuring runway safety with new global reporting system

To ensure the safety of aircraft on the runway, CAG implemented the latest global reporting format developed by the International Civil Aviation Organization (ICAO) for assessing and reporting runway surface conditions. The new format aimed to mitigate the risk

of runway excursions by providing flight crew with an improved assessment of runway for take-off and landing.

To meet the requirements, CAG developed a new runway condition reporting system which automatically assesses and relays any changes in runway surface characteristics to air traffic controllers and pilots in real time. Data was collected by rain gauges and analysed by the system, removing the need for manual inspections. Additionally, at Seletar Airport, solar panels were installed to provide a more cost-effective and greener solution for the new system implementation. Following rigorous trials and tests for accuracy, the new system at both airports went live by end 2021, in compliance with ICAO's requirements.

#### Transforming airside operations with new solutions

The use of innovative technologies, including automation and robotics, to transform airside operations and optimise manpower deployment continued to be top priorities at Changi Airport. In August 2021, following the success of trials

# STAYING OPERATIONALLY READY

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**CAG enhanced its flight operations and airside functions with more efficient and innovative technologies, as it prepared for travel recovery.**

using autonomous guided vehicle to haul baggage, the airside team worked with ground handlers and airlines to redesign the concept of operations for the autonomous

baggage tractors to serve live flights. By December 2021, a fleet of self-driven tractors were supporting Singapore Airlines' year-end peak period operations.

Another area of innovation was the trial of video analytics at the apron to improve operational efficiency. With real-time tracking capabilities backed by video analytics, gate planners would have full visibility of aircraft turnaround activities and a more accurate prediction of delays. This, in turn, would allow them to change gates to meet dynamic operational demand and achieve better on-time performance.

As Changi Airport moves towards a three-runway and multi-apron operation, there is a need to ensure that airport professionals are trained to work in an increasingly complex airside environment. Attracting and retaining airside talent is paramount. CAG thus embarked

on a transformation programme to redesign airside job roles and groom airside professionals with the full range of capabilities required to manage future operations confidently and efficiently. The first batch of airside professionals completed their six-month training and were deployed in April 2022.

## A data-driven approach to manage assets

Asset management and inspection is typically manpower heavy. To streamline processes and improve productivity, CAG's Engineering and Development (E&D) team enhanced its digital asset management and inspection platform to automate process flow, and move towards a new targeted asset maintenance regime driven by data.

Beyond the mere digitisation of maintenance checklist, the new approach leveraged digital tracking to replace on-site verification of works performed by contractors, automated abnormality detection, and smoothed process flow through system-activated alerts for exceptional handling. With its nimble, no-code capability, users could also easily set up new customisable maintenance checklists on the platform and instantly linked it to automatic audit checks and abnormality detection. This greatly improved cost and manpower efficiencies in the otherwise laborious task of maintenance.

In 2021, the platform was scaled up to meet the needs of other business units which could conveniently tap on the data



>> CAG explored the use of technology with Changi General Hospital to better manage casualties from an aircraft accident.





>> New solutions, such as firefighting robots, were trialled at Exercise Bobcat to improve firefighting capabilities.

collected from the platform. The enterprise-wide version hosted 23 web applications and more than 1,000 users across the organisation, five-fold that of its initial launch.

#### Deploying sustainable solutions

To support organisational-wide efforts in sustainable airport operations, CAG focused its efforts to use cleaner energy and reducing electricity consumption. It embarked on a project to upgrade its Terminal 2 chiller plants and air handling stations/units, which were nearing their end-of-life cycles, to best-in-class energy-efficient models. It tapped on smart technologies, such as fault detection diagnostics and condition monitoring, for predictive maintenance and more reliable facilities management. The replacement project was awarded a grant by the National Environment Agency for the use of green refrigerant with very low global warming potential value. Upon completion in 2023, the

project would translate to more than S\$3 million worth of energy cost savings for the company and reduce carbon emission footprint of over 6,000 tonnes of carbon dioxide equivalent per year for Changi Airport.

#### Building resilience to climate change

With climate change giving rise to more frequent and intense wet weather, CAG installed sensors in its drains to track water build-up rate in real time to mitigate the risk of flash floods within the airfield and its surroundings. It drew on the concept of 'Google maps' to develop an interface that allowed the E&D team to identify at a glance which drains required immediate attention. The new approach, which categorised water levels by colours, monitored abnormalities more efficiently and allowed resources to be deployed on-demand rather than by schedule. Plans are underway to integrate this system with the existing building management system and fault management centre,

synergising operations between the drainage network and the pumped drainage systems serving various subterranean facilities.

#### Leveraging technology for a smooth airport experience

CAG strives to provide an inclusive and seamless airport experience for every passenger and regularly reviews areas of improvement, including passenger mobility. Noticing a wide gap between its remote bus gate building and buses parked at the apron kerbside to pick up passengers, which might pose safety concerns and a challenge for passengers, especially those with less mobility and with heavy bags, a new seamless boarding feature was installed at the new C21 and D33 remote bus gates for added passenger safety and comfort. The mechanised ramp, which levelled the ground for boarding at remote bus gates, would greatly aid such passengers, as they would no longer need to step up and down during boarding.

# BUILDING THE FUTURE OF CHANGI AIRPORT

CAG conducted a thorough review of the Terminal 5 (T5) functional plans to make it modular, sustainable and pandemic-ready. On the construction front, various project teams spared no effort to deliver their work on time despite the challenges faced during the pandemic.

## Building a three-runway system

Following the operationalisation of Runway 3 for civil use in December 2020, Runway 2 was closed for further infrastructure upgrades. The works included a network of taxiways to connect Runways 2 and 3, an upgrade of the existing drainage system to cope with climate change, a new set of navigational aids, as well as ancillary buildings to support the specialised systems. The three-runway system is expected to be commissioned in the mid-2020s.

## Enhancing connectivity for Changi East

CAG also continued with the construction of underground tunnels at Changi East. One of them

is the Intra-Airside Road Connection (ARC), which provides a dedicated roadway for airside vehicles to traverse the airfield without interfering with aircraft movement on the ground. It is a 2.8-kilometre-long dual carriageway with two lanes each and comprises a series of depressed roads and underground road tunnels that connect from the future T5 terminal buildings to the Changi East Industrial Zone. The first 1.1-kilometre stretch of ARC is slated to be completed in the third quarter of 2022.

Another major construction is the Inter-Terminal Bored Tunnels (ITBT) between Terminal 2 (T2) and T5. About 1.7 kilometres in length, the ITBT consists of three bored tunnels which will house the automated people mover and the baggage handling systems, allowing seamless passenger and baggage transfers between T5 and the existing terminals. The Tunnel Boring Machines (TBMs) were manufactured overseas and delivered to the site progressively in 2021 before being put into operation. The first TBM was

successfully launched and had started its tunneling journey towards T2 in January 2022.

## Recognising Changi East contractors for keeping high safety standards

The past two years had not been easy for Changi East contractors as they braved through material and manpower resource challenges, while adhering to stringent safe management measures amid the pandemic. To inculcate a good safety culture, the Changi East Safety (CES) team launched the inaugural Workplace Safety & Health Recognition Awards to recognise contractors who demonstrated high standards of construction safety in 2021. Good safety practices were also shared by the winning contractors to facilitate mutual learning.

Moving forward, the CES team will work closely with project safety managers and project managers to forge closer collaboration and partnership, making Changi East a sustainable and safe workplace for all.



>> The Changi East team gathered in front of the cutter-wheel which had since begun its tunneling journey.



# GEARING UP FOR TRAVEL RETAIL'S RECOVERY



>> As passenger traffic picked up pace, CAG worked closely with its tenants to extend their operating hours and encouraged those who were closed to restart operations.

The travel retail landscape remained challenging due to the low passenger traffic in the last year, but CAG continued to support its tenants. This included providing elective trainings to upskill frontline staff to help tenants manage their manpower resources. CAG also kept tenants abreast of the latest Covid-19 directives and developments, working closely with them to ensure compliance on the ground.

The steely support was reassuring for tenants and several top brands cemented their partnership with CAG during the depth of the crisis, reflecting their confidence in the Changi air hub. Fresh leases were also inked with key souvenirs concessions, as well as luxury brands such as Gucci, Hugo Boss, Montblanc, Prada, Rimowa and Saint Laurent.

## Dining in a safe environment

Following the detection of the Delta variant and rising concerns

of Covid-19 transmissions at the airport, Changi's passenger terminal buildings were closed to the public from 10 May to 31 August 2021 for the rigorous testing of the entire airport community, so that any potential Covid-19 cases would be swiftly isolated and treated. However, the airport remained open for air travel and CAG worked with food and beverage tenants to ensure that there were sufficient meal options to cater to departing passengers and the airport community.

Measures were also taken to ensure the safety of all airport visitors and workers. Perspex shields were installed on all the dining tables in the staff canteens and Kopitiam in Terminal 3 (T3). Air purifiers with HEPA filters were also placed within the premises.

To prevent inter-mingling among airport workers and the public when the terminal buildings reopened, a new dedicated dining area was set

up next to Kopitiam for airport staff. CAG also worked with the canteen and foodcourt operators to switch to the use of disposable wares in the initial days of reopening to minimise virus transmission through surface contact.

## Capturing the imagination of shoppers

As passenger traffic picked up pace with the launch of Vaccinated Travel Lanes (VTLs) in September 2021, CAG worked closely with its tenants to extend their operating hours and encouraged those who were closed to restart operations. By March 2022, about seven in 10 shops at Terminal 1 (T1) and T3's transit areas were open for travellers.

CAG also ramped up on promotions with brands to rekindle the joy of shopping and dining in the Transit Hall. For example, CAG partnered Lotte and lined up a series of exciting brands at the new pop-up space at T3's transit hall, offering travel exclusive products, some of which were limited editions.

When the terminal buildings reopened in September 2021 following a four-month closure, CAG was quick to welcome visitors back to the airport with a travel-themed exhibition featuring Instagram-worthy backdrops from seven destinations. The airport also rolled out various dining promotions and shopping campaigns such as the 2xGST promotion in November 2021 and January 2022, as well as the 'Tsum into a Roarsome New Year' campaign, to drive sales to support tenants during the festive period.

The revitalisation of the north cluster at T3 Basement 2, which converted two retail units into four

## GEARING UP FOR TRAVEL RETAIL'S RECOVERY

open-concept food retail kiosks, was also completed by December 2022. The refurbishment not only rejuvenated the space, but also greatly improved the visibility of the retail units located along the secondary thoroughfare, thereby enhancing the marketability of the retail units and improving long-term rental yield.

Shoppers also had more food and beverage options. Of the four new food kiosk tenants, three were new to Changi – 365 Juices Bar, RotiBoy and TheJellyHearts. The other three existing kiosk tenants Jollibean, KOI and Hokkaido Baked Cheese Tart also underwent minor refurbishment works to enhance the ambience at the expanded common area. By January 2022, the number of visitors at Changi's public areas had increased by over 50% compared to September 2021.

With travel slowly recovering, Singapore residents were still exploring local options to spend their weekends and holidays. CAG continued to engage locals on the hunt for things to do at home with attractive curated events for their enjoyment. In March 2022, it launched 'Changi's Sweetest Treats', a collaboration with the well-loved lollipop brand Chupa Chups, to delight families with large, colourful photo spots, including the largest Chupa Chups lollipop display in Singapore, as well as workshops to keep the young ones engaged.

### Growing new sales channels

Even as CAG welcomed more passengers, it continued to explore opportunities to grow its non-traveller market, so as to provide tenants with an additional channel of revenue.



>> CAG secured Porsche's partnership to offer an all-electric Porsche Taycan as the Grand Prize for the 'Win With Changi' campaign.

In the previous year, CAG's e-commerce portal iShopChangi. com (ISC) had expanded its business model to one that actively targeted the non-travellers. Since then, it had onboarded various off-airport brands such as Dyson, Glenmorangie, IDS Skincare and Saito to provide local shoppers with an extended range of products and potentially, an opportunity to break into the travel retail market. Local brands including Kinohimitsu were also able to use the portal to showcase their products to the world.

The ISC platform also went through an upgrade which allowed its systems to scale its capabilities on merchant support, hyper-personalisation and content management to serve its customers – both partners and customers. Riding on the momentum of the growing e-commerce trade, ISC worked closely with partners

to offer exclusive products and limited-edition merchandise. These products were a hit among consumers – Diageo's Legends Untold eight-bottle single-malt whisky collection (worth S\$3,900) launched exclusively in Singapore on ISC during the Happy Haul-idays Christmas campaign and was sold out within 24 hours of launch. Other limited-edition specials included first-to-launch SKNNY Coffee from Kinohimitsu and travel-exclusives from Royal Salute and Martell.

The close relationships fostered with new and existing retailers helped maintain competitive pricing across an assortment of bestselling products and allowed consumers to get their favourite wines and spirits at up to 40% discount all year round. ISC has since seen a seven-fold growth in alcohol sales compared to the year before.



iSC went a step further and also rolled out the Seller University, a learning hub that equips new merchants with a full suite of tools and bite-sized tips to help them achieve better sales on the e-commerce platform.

Following 2020's successful launch of the campaign, iShopathon, which saw popular influencers and celebrities host live streaming sessions to promote new products and bestsellers from iSC, the campaign continued into 2021. Participating brands saw up to three-fold increase in sales 24 hours after the live streaming sessions.

With the accelerated expansion into the domestic, non-traveller market since 2020, the iSC team also stepped up on their customer experience strategy to provide customers with an omni-channel beauty experience. It collaborated with Estée Lauder Companies to launch a physical store BEAUTIQUE by iSHOPCHANGI in Jewel Changi Airport (Jewel), combining both online and offline shopping experience into one seamless journey. The experience has since won the Omnichannel Strategy of the Year – Singapore in the Retail Asia Awards 2022.

It also secured Jewel's concierge counter as an additional collection point for iSC purchases since April 2021. The extra collection point gave non-travelling shoppers a guaranteed earlier collection timing and removed the need for a minimum spend to shop on iSC.

iSC went on to win the Best Innovation Award – The Disruptor in the SAP Best Run Awards for SEA 2021. The accolade recognises emerging enterprises with a strong culture of innovation and which seek creative solutions to persistent problems during unprecedented times.

On the dining front, CAG's food delivery platform Changi Eats continued to clock record high sales, backed by attractive promotions and specially curated festive sets in partnership with off-airport festive merchants such as Matchaya and The Plattering Co.

### Emerging stronger through innovation

The spirit of innovation remained strong in CAG as it continued exploring ways to enthrall customers with its hallmark Changi Experience.

It launched mobile wallet Changi Pay in October 2021, allowing shoppers and diners to make contactless QR payments at about 260 Changi Airport and Jewel stores, utilise exclusive discount vouchers upon check-out, and seamlessly earn Changi Rewards (CR) and CapitaStar points (for Jewel stores) all at one go with just one scan. Changi Pay can also be used while shopping on iSC.

In November 2021, CAG launched the year-long 'Win With Changi' campaign, a twist to the former 'Be a Changi Millionaire' campaign and which incorporated elements that were more relevant to the retail landscape during the pandemic. It secured Porsche's partnership to offer an all-electric Porsche Taycan as the Grand Prize. Attractive prizes included the weekly top prize of one million CR points and quarterly prizes of 10 million CR points.

With travel curtailed and the airport terminals closed in the year, there were lesser avenues available for CR members to redeem and use their e-vouchers. To maintain its competitiveness as a loyalty programme, CAG introduced the new CR e-voucher flex that is accepted at both Jewel and the airport terminals in July 2021. The CR e-voucher flexi is now widely accepted at more than 80% of shopping and dining outlets in Jewel.



>> iShopChangi opened BEAUTIQUE by iShopChangi in Jewel, combining both online and offline shopping experience into one seamless journey.

# SHINING THROUGH THE DARKEST NIGHTS

With the pandemic into its second year and dampening retail and dining businesses across Singapore, Jewel Changi Airport (Jewel) stayed resilient and continued to secure new tenants and refresh its dining and shopping options for customers. Some of the notable local and international brands that have opened shop in Jewel during the year included Asics, Bath & Bodyworks, BEAUTIQUE by iShopChangi, Converse, NY Verden, Sift & Pick x MARHEN.J, Tai Er and Tsui Wah.

The one-month closure of Jewel from 13 May 2021 and island-wide dining restrictions imposed by the government on 14 June 2021 exacerbated the challenging operating conditions, but Jewel Changi Airport Development (JCAD), of which CAG is a majority shareholder, remained tenacious in supporting its tenants during this difficult period.

To drive footfall and spend at Jewel, JCAD rolled out monthly marketing promotions and

collaborated with banks and payment services to offer enticing deals. It also onboarded its tenants to the e-commerce platforms of CAG and its other shareholder, CapitaLand. These platforms, which included Changi Eats, iShopChangi, CapitaEats and eCapitaMall, provided participating tenants with additional sales channels and allowed them to expand their market catchment beyond Changi Airport.

JCAD also continued to attract visitors to Jewel with novel offerings and activities. In March 2022, it launched the Jewel-rassic Quest – a dinosaur-themed game which uses augmented reality technology that allowed dinosaur-lovers to see magnificent prehistoric creatures roaming in the Shiseido Forest Valley and other places in Jewel. Participants could also go on a treasure hunt for dino eggs or immerse in simple games such as playing pretend to be an archaeologist.

## Special events to attract visitors and attention

As one of Singapore's most iconic destination, Jewel was selected by the People's Association (PA) as the venue for its Golden Jubilee Chingay50 celebration in February 2022. Chingay is an annual parade held as part of the Lunar New Year celebrations to showcase Singapore's multicultural heritage. The 1.5-hour extravaganza, hosted by Prime Minister Lee Hsien Loong and graced by guest-of-honour President Halimah Yacob, was held in the heart of Jewel, against the backdrop of the world's tallest indoor waterfall and amid the lush greenery of the mall's indoor garden.

The event featured a line-up that included special effects and interactive floor projections, with both traditional and modern elements that appealed to both



>> Jewel was selected as the venue to hold the Chingay50 celebration.



>> Mediaworld's annual extravaganza Star Awards 2021 was one of the many events that helped Jewel maintain top-of-mind recall during the pandemic.



the young and old. JCAD worked seamlessly with the PA team to facilitate the big-scale event that required installation of heavy-duty equipment and other logistical requirements, delivering a memorable milestone event in the history of Singapore.

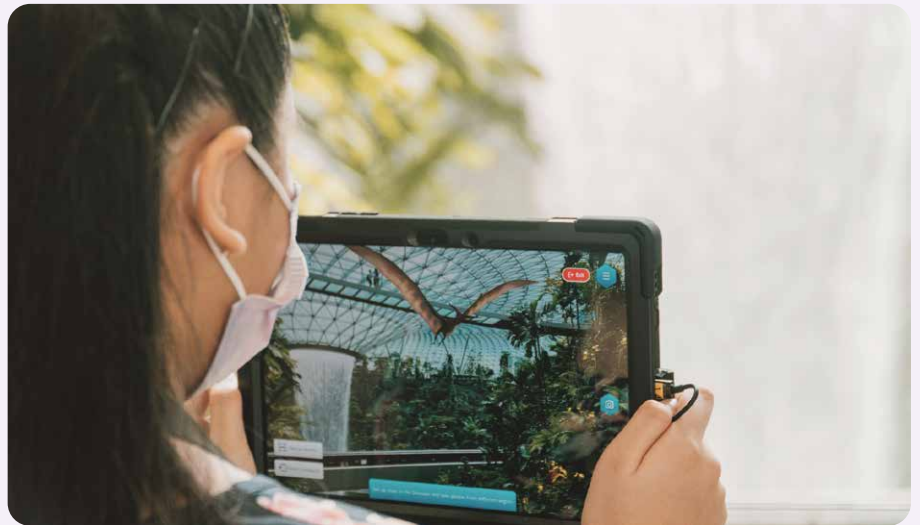
Through strategic partnerships forged with the Singapore Tourism Board and Mediacorp, JCAD also ensured that Jewel gained top-of-mind recall with visitors even during the pandemic. It hosted events such as Mediacorp's annual extravaganza Star Awards 2021 and was the location of choice for an episode of reality TV programme, The Apprentice. These shows were aired to both local and regional audiences and profiled Jewel in a never-before-seen light.

#### Popular programmes returned with refreshing twists

As part of the 2021 year-end activities, the Changi Experience Studio in Jewel brought back its popular educational overnight camps and other day programmes for a second time, after an inaugural sell-out run the year before.

Several new ideas were injected to enhance and refresh the various product offerings. These included the introduction of new workshops – an airport-themed Design Thinking workshop and a DJI Robomaster workshop. There were also other programme enhancements, such as the addition of a moss wall craft workshop to the nursery tour and more simulation activities to the Airport Emergency Experience.

Glamping on Cloud9 Piazza at the topmost level of Jewel also returned with a twist, in the form of a five-hour Glam-party concept which included a festive feast set-up in collaboration with Changi Eats, as well as games and visits



>> Jewel-rassic Quest allows dinosaur-lovers to see magnificent prehistoric creatures such as the T-Rex and Velociraptor, and take part in mini games in Jewel.

“

**Through strategic partnerships, JCAD ensured that Jewel gained top-of-mind recall with visitors even during the pandemic.**

to attractions. The programmes received close to 3,000 bookings and all activities were sold out.

During the December school holidays, visitors were also treated to a visual feast of snowfall against the backdrop of a 16-metre-tall Christmas tree. Destination-themed installations featuring iconic global landmarks were set up in the Shiseido Forest Valley and Canopy Park, providing visitors with plenty of novel photo opportunities.

#### Most awarded mall in Singapore

For its unique leisure offerings, Jewel received six awards in 2021,

entrenching its position as the most awarded mall in Singapore. It won Design of the Year award in the President's Design Award (P\*DA) 2021. The P\*DA is Singapore's highest honour for designers and designs across all disciplines and the award is conferred by the President of the Republic of Singapore and jointly administered by the DesignSingapore Council and the Urban Redevelopment Authority (URA).

Jewel was also recognised as a 2021 Tripadvisor Travellers' Choice award winner in the attractions category, placing it among the top 10% of attractions worldwide. This award celebrates businesses that consistently deliver memorable experiences to visitors and earn great reviews on Tripadvisor over the past year.

In addition, Jewel clinched the Outstanding Shopping Mall Experience Award at the Singapore Tourism Awards 2021 for the second consecutive year. Other awards included the Luxury Lifestyle Awards 2021 for The Best Luxury Shopping Mall in Singapore; BCA Awards 2021 for Construction Excellence Award and the International Architecture Award 2021.

# PROVIDING ONE-STOP TRAVEL SERVICES

Changi Travel Services (CTS), a wholly-owned subsidiary of CAG, provides travel solutions for leisure and business travellers.

As border restrictions were relaxed and more travellers started streaming into Singapore through the Vaccinated Travel Lanes (VTLs) from September 2021, CTS stepped up its travel-related services in order to provide visitors a safe and smooth travel experience.

When the Singapore government required travellers entering Singapore to download the TraceTogether (TT) app on their mobile phones, CTS provided the rental of TT tokens for travellers who do not have phones. CTS provided supporting technology and manpower across many Singapore checkpoints (air, land and sea) for this cross-agency collaboration, and the TT token rental service played a critical role in Singapore maintaining its edge as a safe travel destination amid the global pandemic.

CTS, through its Changi Assure brand, was also one of the three local insurers to provide Covid-19 travel insurance for inbound visitors, offering coverage options that were in line with local regulations.

Its core Changi Recommends brand continued to serve passengers with meet-and-greet concierge services, adding to its suite of offerings for travellers.

## New business ventures

To offer a wider range of travel-related services to travellers, CTS also made its first foray into the telecommunications industry by partnering M1 as a Mobile Virtual Network Operator (MVNO). It launched Changi Mobile in September 2021 and, within four months, garnered a healthy take-up of more than 10,000 subscribers. Changi Mobile continues to finetune its strategy and strengthen its brand identity as it rolls out new incentives to

attract new customers and retain existing ones.

To reduce the hassle of travellers having to withdraw large sums of money from the bank and changing foreign currencies at brick-and-mortar stores, CTS also launched its own foreign exchange service in the first quarter of 2022. Travellers can now order and pay for their desired currencies online and collect at Changi Airport just before they fly, or after they land.



>> CTS launched Changi Mobile in September 2021.



>> Travellers can now order and pay for their desired currencies online and collect at the airport just before they fly, or after they land.



# EXPANDING CHANGI'S EXPERTISE



>> Contactless solutions were implemented at Clark International Airport's new passenger terminal for greater convenience.

As part of its new business initiatives, Changi Airports International (CAI), a wholly-owned subsidiary of CAG, partnered Singapore Exchange to launch the iEdge-GateEq Aviation and Travel Index in November 2021, providing investors with another product within the global aviation and travel industry.

During the year, CAI continued to consult for overseas airports. In China, CAI clinched a new commercial advisory contract with Jinan Yaoqiang International Airport and consulted for Changsha Huanghua International Airport. It continued to optimise the passenger flow and commercial layout for Guangzhou Baiyun International Airport's new Terminal 3, existing Terminal 2, and a satellite terminal, as part of a five-year partnership. It also trained airport professionals from Beijing Daxing International Airport in areas such as smart technology application.

CAI holds a 49% stake in Sino-Singapore Chongqing Airport Commercial Management Co., Ltd, a joint venture with Chongqing Airport Group, which manages the non-aeronautical business of

Chongqing Jiangbei International Airport. Domestic traffic grew strongly until it was curtailed by fresh Covid-19 outbreaks in China from August 2021. The joint venture continued to attract new tenants to uplift commercial experience.

## Overseas investments

CAI has investments in overseas airports. In Brazil, CAI has a 51% stake in the concessionaire which operates Tom Jobim International Airport in Rio de Janeiro. The Covid-19 pandemic continued to weigh on the airport's performance. Brazil's deep economic recession, coupled with the global Covid-19 pandemic that impacted travel demand, made it untenable for the concession to continue under the existing terms of the agreement. The concessionaire filed for the return of the airport concession in February 2022. Until a new operator is selected, the concessionaire continues to manage the airport.

In India, CAI holds a 30% stake in Bengal Aerotropolis Projects Limited, which develops Durgapur Aerotropolis, India's first privately managed airport city. At Kazi Nazrul Islam Airport, Indigo and Spicejet operated up to six weekly

flights to connect to the five largest metropolitan airports in India (outside West Bengal state), namely Bangalore, Chennai, Delhi, Hyderabad and Mumbai. The average load factor for Chennai and Mumbai had reached pre-Covid levels by March 2022. Despite the pandemic, demand for land at the aerotropolis stayed strong.

CAI and its partners operate Fukuoka Airport through Fukuoka International Airport Co. (FIAC). Domestic traffic recovered to 50% of pre-Covid levels, while international traffic remained restricted by border controls. FIAC implemented strict operating expense discipline, deferred major capital expenditures, and obtained financial support from government agencies and lenders.

In the Philippines, CAI holds a 15% stake in Luzon International Premiere Airport Development Corp (LIPAD), which operates and maintains Clark International Airport. The airport grew its cargo flights by 10% year-on-year and recorded a 10% increase in cargo tonnage. CAI worked with LIPAD and various stakeholders to complete operational readiness trials for the new 110,000-square-metre passenger terminal. It opened on 2 May 2022 and was the first in the Philippines to deploy a full suite of contactless passenger solutions.

In Russia, CAI's airports in Anapa, Krasnodar and Sochi saw significant growth in domestic traffic and a strong recovery in international traffic. However, on 24 February 2022, the Russia-Ukraine conflict led to the closure of airspace in southern Russia. Flight operations at Krasnodar and Anapa International Airports were suspended, while Sochi International Airport continued to operate as an alternative hub. The ensuing conflict and disruption to flight operations impacted the airports' performance in the last month of the financial year.

# FORTIFYING THE WORKFORCE

In 2021, the battle against Covid-19 became more complex with the emergence of more infectious variants. Amid the turbulent situation, CAG continued to provide for flexible work arrangements for its employees. In the office, the company ran a tight operation to ensure a safe work environment through close contact tracing of employees who tested positive for Covid-19. The work cubicles and other workspaces visited by these employees were promptly disinfected to keep the office safe.

CAG also worked swiftly with its airport partners to ensure that employees working in the frontline were well-protected from the risk of virus transmission. More Personal Protective Equipment (PPE) were procured, and employees were also trained to be certified mask-fitters. Antigen Rapid Test kits were distributed to all employees through the airport community's network of Business Continuity Planning managers and vending machines located across various work areas.

## Keeping the team engaged

As CAG continued its hybrid work arrangements, employee

communication, engagement and well-being remained a key goal throughout the year.

CAG kept employees updated through three townhalls, which saw record high participation of more than 75%. The company also made use of internal communications channels such as In.Touch, its internal social media platform, and electronic direct mailers, to keep its employees abreast of important airport and company ongoings.

Through these internal communication channels, CAG celebrated with its employees achievements like the Skytrax 2021 award for World's Best Airport Staff and ACI's 2021 ASQ award for Best Airport in the Asia-Pacific. New initiatives, like the launch of the Changi Pay e-wallet, and community happenings, such as VIP visits, were also publicised through these channels.

To allow employees to know their community better and foster a closer bond among the CAG family, colleagues were featured on In.Touch for occasions like the Service Appreciation Awards.

Employees were encouraged to use the platform to share about their work and personal interests. Calls to rally the community to participate in internal campaigns or volunteering opportunities were also made via In.Touch and other internal communications platforms.

With Covid-19 casting a pall over employees' mental well-being, CAG also supported its people with initiatives that helped to assuage their anxiety and restore work-life balance. This included the continuation of its Healthy Habits, Happy Life (HHHL) initiative. Under this programme, an app was introduced for employees to sign up for health activities and track their progress. The app was launched in April 2021 with a live exercise session featuring CAG's senior management. Since then, about 400 employees have been using it every month to support their wellness anywhere, anytime.

During this period, keeping a pulse on Employee Engagement was also critical. Throughout the year, quick polls via intranet pop-up windows and a pulse survey were introduced in addition to the annual employee engagement survey. This allowed the company to gather insights, receive feedback on the progress of measures taken, as well as address employees' areas of concern.

## Cultivating a culture of innovation

To emerge stronger from this crisis, CAG continued to build agile mindsets among its people and prepare them for the future of work. It invested in embedding new digital skillsets to enable innovation and transformation within the organisation. With the aspiration to become Singapore's most innovative company, a virtual Learning Festival themed 'Explore the Innoverse' was held in November 2021. Employees shared stories on how the CAG Leadership Principles and Growth Mindset guided them to experiment and



>> A live exercise session, conducted by CAG's very own fitness enthusiasts and supported by members of senior management, was broadcast online.



scale up their ideas. E-learning courses were also handpicked to supplement employees with innovation-related learning.

To help employees thrive in change, the Growth Mindset programme continued into its second year. In January 2022, CAG's management committee piloted Growth Meetings with the aim of creating an environment conducive for promoting experimentation. Training sessions were rolled out to people managers and enterprise leaders to equip them with the tools and skills for engaging their teams. Marketing campaigns were also rolled out to encourage the use of growth language at work.

In line with efforts to catalyse the development of new ideas and foster applied learning, the CAG Accelerator Programme was launched in November 2021, enabling employees to tap an internal network of consultants, sharpen ideas and explore technological possibilities. This helped employees identify the right approaches to deliver impactful solutions to enable innovation to take place across all levels within the organisation.

### Strengthening employer branding

Despite the challenging outlook on aviation in financial year 2021/22, CAG continued to focus efforts in emphasising its value proposition – creating and maintaining a nurturing environment for employees to grow professionally while making a purposeful difference to the growth of Singapore's air hub, aviation community and Singapore. This has helped maintained CAG's position as an employer of choice, with industry affirmation coming in the form of three notable awards, namely, the Randstad Employer Brand Award for the second most attractive employer in Singapore, Singapore's 100 (S100) Leading Graduate Employers (winner in Aviation, Transport & Supply Chain)



>> Changi Foundation, together with over 30 other airport partners and individual airport staff, donated S\$1.1 million worth of medical supplies to the Indonesian Ministry of Health in August 2021.

and a Gold award for Excellence in Crisis Management and Recovery in the HR Excellence Awards.

The Randstad Awards recognise the most attractive employers in 33 markets across the globe. This is the eighth 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 also placed second in another sector category – Hospitality and Leisure & Tourism.

Held for the ninth year, the 2021 HR Excellence Awards honour distinguished organisations in Asia with exceptional employee management programmes and robust human resource strategies. CAG was recognised for proactively identifying crises, crafting plans, implementing strategies and tracking progress – all while keeping employees motivated, engaged and safe.

### Corporate social responsibility

Even with the pandemic throwing new curveballs during the year, CAG remained steadfast in cultivating an organisation that

cares for the community by creating opportunities for employees to give back to society via its philanthropic arm, Changi Foundation.

At the peak of the Covid-19 pandemic, when the virus had a firm grip on Singapore's neighbours, the Changi Airport community came together to support Indonesia. Changi Foundation, together with over 30 other airport partners and individual airport staff, donated 1,380 oxygen concentrators, 15,350 nasal cannulas, and 500 cannula connectors to the Indonesian Ministry of Health in August 2021. The shipment, valued at over S\$1.1 million, was shipped from Los Angeles to Jakarta by airline partners Cargolux and Singapore Airlines, with SATS and CEVA Logistics supporting the ground handling.

Changi Foundation also partnered Metta Welfare Association to provide special-needs youth with training and employment opportunities. Volunteers from CAG empowered artists from the Association's Arts@Metta programme with conversational and story-telling skills to promote their artistic creations. The programme culminated in a virtual art fair held in December 2021, where the artists sold their creations to a virtual audience.

# STRENGTHENING BONDS WITH OUR GLOBAL FANS

During the year, Changi Airport continued to engage both local and global audiences through its social and online platforms to retain top-of-mind awareness and build brand love. Against the backdrop of a crowded social media space, its Facebook page reached another key milestone, hitting a new record of five million followers.

At the onset of the pandemic, CAG developed a Covid-19 information hub on the Changi Airport website that included a comprehensive list of frequently asked questions. The information hub was a useful resource for travellers who needed help navigating the processes of travelling into and through Singapore.

Besides being a credible source of information for travellers, CAG's social and online content also served to keep the airport community and visitors abreast of the measures implemented in Changi for safe travel.

As travel picked up with the introduction of Vaccinated Travel Lanes (VTLs), Changi Airport's online channels became key go-to sites for passengers seeking information about visiting Singapore.

## Engaging fans with creative content

More than 3,000 pieces of social media content on the latest travel information and offerings of Changi Airport were shared during the year, reaching close to 600 million people online. To engage the fans and followers of Changi Airport, CAG produced relevant content that kept up with trending topics on social media.

With the pandemic casting the spotlight on frontline workers, CAG also profiled members of the airport community on its blog, Now Boarding. The heart-warming stories of how they coped with the changes and challenges at work during the pandemic were further amplified on Changi's social media platforms such as Facebook, Instagram and LinkedIn. Some of the featured profiles included Aisha, a former Passenger Service Agent turned Cargo Agent from dnata. Her story was well-received by the public, reaching over 6,000



>> With the spotlight on aviation frontline workers, CAG also profiled some of them on its blog, Now Boarding.

page views, and was cited by Prime Minister Lee Hsien Loong in his 2021 National Day Rally speech.

## Maintaining Changi's mindshare in key travel markets

While travel curbs were still in place, CAG continued to engage the communities in its key overseas travel markets in Australia, China and Indonesia to maintain Changi's mindshare in these countries.

Changi Airport's Instagram account for the Indonesian market (@changiairport.id) was launched in August 2021 and provided an avenue to reach Indonesians more effectively and inform them of happenings in Changi.

Themed social content and campaigns were also created and carried out in the different overseas markets, promoting Changi and Singapore as a travel destination. Notable campaigns include 'Chalo Changi' – a Bollywood-themed social media campaign to woo travellers to bring their dreams to life and create unique experiences at Changi Airport, as well as 'I Miss Changi' – a key running content theme for Australians and New Zealanders.



>> Changi Airport stayed on top of trending topics by producing content with a Changi twist for its social media platforms, including its very own take of the 'dalgona' challenge from the hit Netflix series, Squid Game.



# LEADERSHIP AND GOVERNANCE

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# BOARD OF DIRECTORS



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## 1.

**TAN GEE PAW****CHAIRMAN**

Mr Tan Gee Paw is the non-executive chairman of CAG. He was appointed to the Board on 1 May 2017 and was subsequently appointed the non-executive chairman of the Board on 23 October 2020.

Mr Tan is currently the Special Advisor to the Chairman of PUB, Singapore's National Water Agency, and Senior Advisor at the Clean Energy Advisory Group, Temasek International Advisors Pte Ltd. He is also a Board Member of Surbana Jurong Private Limited, a member of the Centre for Liveable Cities (CLC) Panel of Distinguished Advisors, and the Adjunct Professor at the College of Design and Engineering, National University of Singapore.

Mr Tan was the previous Chairman of PUB from 1 April 2001 up until his retirement on 31 March 2017. His previous appointments include being appointed as member on a number of government committees, the Principal of Ngee Ann Polytechnic, Permanent Secretary of the then Ministry of the Environment, Advisor on Rail Transformation, Ministry of Transport and Special Advisor to Land Transport Authority.

Mr Tan received the Public Administration Medal (Silver) in 1978 and a Special Award (Gold Medal) for Clean River Commemoration in 1987. He also received the Medal of Commendation at the NTUC May

Day Award in 2005, the President's Award for the Environment in 2007 and the President's Science and Technology Medal in 2015. Mr Tan was conferred the Meritorious Service Medal in 2001 for his work as Permanent Secretary of the then Ministry of the Environment and the Distinguished Service Order in 2010 for his work as Chairman of PUB. In 2011, Mr Tan was conferred the Distinguished Engineering Alumni Award by the National University of Singapore; the Distinguished Member Award by National University of Singapore Society in 2014; and the Distinguished Professional Engineer Award in 2018 by the Professional Engineers Board. He was elected an Honorary Fellow of the Institution of Engineers, Singapore and awarded the Lifetime Engineering Achievement Award in 2015. Mr Tan was also elected as a Fellow of the Academy of Engineering, Singapore in 2012.

Mr Tan graduated with First Class Honours in Bachelor of Engineering (Civil) from the University of Malaya in 1967, and a Master of Science in Systems Engineering from the University of Singapore in 1971. He was conferred an Honorary Degree of Doctor of Science from the University of Westminster, UK in 1993; and an Honorary Doctorate in Engineering from Sheffield University, UK, in 1995. In 2013, he was conferred an Honorary Degree of Doctor of Engineering by the Nanyang Technological University.

## 2.

**LEE SEOW HIANG****EXECUTIVE DIRECTOR AND CEO**

Mr Lee is the CEO of CAG. He was appointed to the Board on 16 June 2009.

Mr Lee is concurrently Chairman of Changi Airports International Pte Ltd (CAI), Changi Foundation Limited and Jewel Changi Airport companies. He also chairs the National Library Board and sits on the board of NTUC FairPrice Co-operative Ltd. He holds the appointment of Immediate Past President on the Airports Council International (ACI) Asia-Pacific Regional Board and is a Director on the ACI World Governing Board.

From 1989 to 2005, Mr Lee held various appointments in the Republic of Singapore Air Force (RSAF) and the Ministry of Defence, with his last appointment being Deputy Head of Air Operations in HQ RSAF. From 2005 to 2008, he was the Principal Private Secretary to the late Minister Mentor Lee Kuan Yew in the Prime Minister's Office. Mr Lee was awarded the Singapore Armed Forces (SAF) Overseas Scholarship and President's Scholarship in 1989. He was also awarded the SAF Postgraduate Scholarship (General Development) in 2002. He holds a Bachelor of Arts (Honours) from the University of Cambridge, UK, and a Master of Business Administration from the Massachusetts Institute of Technology, USA.

# BOARD OF DIRECTORS

3.

## TAN CHING YEE

Mrs Tan is a Non-Executive Director of CAG. She was appointed to the Board on 1 May 2017.

Mrs Tan is the Permanent Secretary of the Ministry of Finance, Singapore. She also holds the appointment of Permanent Secretary (Special Duties), Prime Minister's Office. She assumed these posts on 1 May 2016. She is Chairman of the Inland Revenue Authority of Singapore and the Accounting and Corporate Regulatory Authority, and a board member of the Lee Kuan Yew School of Public Policy.

Mrs Tan was previously Permanent Secretary at the Ministry of Health and the Ministry of Education. Before that, she was the Chief Executive of the then Infocomm Development Authority of Singapore, and also Deputy Secretary (Infocomm and Media Development) at the former Ministry of Information, Communications and the Arts. Prior to these roles, she had worked at the Ministry of Education and Ministry of Trade and Industry.

Mrs Tan read Economics at Cambridge University and obtained her Master's of Science in Management from the Graduate School of Business, Stanford University.

4.

## TITUS LEE

Mr Lee is the Alternate Director to Mrs Tan Ching Yee. He was appointed to the Board on 15 January 2022.

Mr Lee is Director (Reserves and Investment) at the Ministry of Finance. Prior to joining the Ministry of Finance in November 2021, he held appointments at the Ministry of Health, the former Workforce Development Agency and the National Population and Talent Division. At the Ministry of Health, Mr Lee held the positions of Director, Aged Care Services, and Deputy Director of the Healthcare Finance Division. At the Workforce Development Agency, he was the Deputy Director overseeing workforce measures for low-wage workers. At the National Population and Talent Division, he was the Assistant Director involved in strengthening Marriage and Parenthood policies. Mr Lee started his career in the public service as an Economist with the Ministry of Trade and Industry.

Mr Lee was awarded the Public Service Commission Overseas Merit Scholarship and graduated from Northwestern University, majoring in Mathematical Methods in the Social Sciences and Economics. He also holds a Masters in International and Development Economics from Yale University.

5.

## PROFESSOR TAN KONG YAM

Professor Tan is a Non-Executive Director of CAG. He was appointed to the Board on 30 January 2015.

Professor Tan is presently Professor of Economics at the Nanyang Technological University. He is also Deputy Chairman of APS Asset Management (China) and sits on the boards of Surbana-Jurong and CapitaLand China Trust Management.

From 1984 to 1988, Professor Tan was the Assistant Director on exchange rate policy at the Monetary Authority of Singapore and assistant to the late Dr Goh Keng Swee, the former Deputy Prime Minister of Singapore, who had been invited by Mr Deng Xiaoping to advise China on economic development strategy. From June 2002 to June 2005, he was a senior economist at the World Bank office in Beijing. In 2004, he was a member of the World Bank expert group on the 11th five-year plan (2006 to 2010) for the State Council in China. The expert group provided analysis and policy recommendations to the Chinese government. Prior to that, he was the chief economist of the Singapore government at the Ministry of Trade and Industry (1999 to 2002) and head of the Department of Strategy and Policy at the NUS Business School. He has also worked at the Hoover Institution at Stanford University and World Bank in Washington.

Professor Tan is a graduate of Princeton University with a Bachelor of Art (Honours) and has a PhD in Economics from Stanford University.



## 6.

**NG CHEE KHERN**

Mr Ng is a Non-Executive Director of CAG. He was appointed to the Board on 1 March 2018.

Mr Ng is Permanent Secretary for Manpower in the Ministry of Manpower, which is responsible for Government policies and programmes covering the workforce and workplaces.

Mr Ng was previously Permanent Secretary (Smart Nation and Digital Government) in the Prime Minister's Office from May 2017 to March 2022, where he led the government's efforts in driving the development of digital enablers for citizens and businesses, and applying digital and smart solutions to improve the lives of citizens in a Smart Nation. He was Permanent Secretary (Defence Development) in Singapore's Ministry of Defence from May 2014 to April 2017 where his portfolio covered defence research and technology, capability development and acquisitions, and defence administration. He was concurrently 2nd Permanent Secretary in Singapore's Ministry of Health from August 2014 to February 2016 where he oversaw the overall operations, emergency preparedness and capacity building for the public healthcare sector in Singapore.

Mr Ng is an International Advisory Panel member of the Lee Kuan Yew Centre for Innovative Cities (LKYCIC) at the Singapore University of Technology and Design (SUTD). He was previously the Chairman of the Government Technology Agency of Singapore (GovTech) board and served as a board member of the National Research Foundation (NRF), Civil Aviation Authority of Singapore (CAAS), Singapore Technologies Engineering Ltd, and CapitaLand Mall Trust.

## 7.

**CHIA SONG HWEE**

Mr Chia is a Non-Executive Director of CAG. He was appointed to the Board on 1 October 2018.

Mr Chia is the Deputy Chief Executive Officer at Temasek.

In February 2021, he was appointed to the board of Agency for Science, Technology and Research (A\*STAR). Mr Chia also serves as a member of Singapore's Advisory Council on the Ethical Use of AI and Data, established by the Infocomm Media Development Authority (IMDA) since 2018.

Prior to joining Temasek in 2011, Mr Chia was the Chief Operating Officer at GlobalFoundries. Before the integration of GlobalFoundries and Chartered Semiconductor Manufacturing Ltd (Chartered), he served as Director of the Board, and President and CEO of Chartered from 2002 to 2009. Mr Chia also held various management positions at Chartered, including Senior Vice President, Chief Financial Officer, and Chief Administrative Officer.

Prior to Chartered, Mr Chia was Regional Controller for Asia, Australia, and the Middle East for the drilling group of Schlumberger, a global oilfield services group.

Mr Chia holds a Bachelor of Business (Accountancy) degree with distinction, from Edith Cowan University, Australia, and is a member of CPA Australia. He was honoured with the EE Times Annual Creativity in Electronics Award for Executive of the Year in 2007.

## 8.

**KELVIN FAN**

BG Fan is a Non-Executive Director of CAG. He was appointed to the Board on 15 August 2018.

BG Fan is currently the Chief of Staff – Joint Staff, Inspector-General and Chief Sustainability Officer in the Singapore Armed Forces (SAF). He joined the SAF in 1998 and has served in various staff and command roles. Prior to his current appointment, BG Fan has served as Director (Policy) in the Ministry of Defence, as well as Chief of Staff – Air Staff, Commander Air Defence and Operations Command, and Head Air Operations in the Republic of Singapore Air Force. BG Fan is also a member of the Singapore Administrative Service and has served as Senior Assistant Director in the Ministry of Trade and Industry, where he was responsible for developing tourism policies such as the Integrated Resorts.

In 1998, BG Fan was awarded the SAF Overseas Scholarship. He has a Master of Economics from Cambridge University, UK, and a Master of International and Developmental Economics from Yale University, USA. BG Fan was also a 2010 graduate of the US Air Force Command and Staff College in Maxwell Air Force Base, USA. In 2013, BG Fan was awarded the SAF Post-Graduate Scholarship as well as the Lee Kuan Yew Post-Graduate Scholarship. He graduated with a Master of Business Administration from Massachusetts Institute of Technology in 2014. In 2015, BG Fan was awarded the Public Service Administration (Military) (Silver).

# BOARD OF DIRECTORS

9.

## CHNG SOK HUI

Mrs Chng is a Non-Executive Director of CAG. She was appointed to the Board on 1 October 2019.

Mrs Chng is the Chief Financial Officer of DBS Group, and a member of the DBS Executive Committee. Prior to this appointment in 2008, she was the Managing Director and Head of Risk Management at DBS Group and held the position for six years.

Mrs Chng is currently a Board member of DBS Bank India Limited. She serves on the board of Singapore Exchange Limited and chairs its Risk Management Committee. Additionally, she is a member of the CareShield Life Council. Mrs Chng previously served on the boards of the Bank of the Philippine Islands, Inland Revenue Authority of Singapore, Housing & Development Board, Accounting Standards Council and, for 10 years, as the Supervisor of the board of DBS Bank (China) Limited.

Mrs Chng is a Chartered Financial Analyst, a Certified Financial Risk Manager, an Institute of Banking and Finance Singapore Distinguished Fellow, as well as a Fellow Chartered Accountant of Singapore. Mrs Chng was the recipient of AsiaRisk's Risk Manager of the Year Award in 2002 and The Asian Banker's Inaugural Risk Manager of the Year Award in 2012. Mrs Chng was named Best Chief Financial Officer at the Singapore Corporate Awards 2013 and Accountant of the Year in the inaugural Singapore Accountancy Awards in 2014. She is a member of the International Women's Forum (Singapore).

10.

## KWA KIM LI

Ms Kwa is a Non-Executive Director of CAG. She was appointed to the Board on 1 October 2019.

Ms Kwa is the Managing Partner of Lee & Lee, Advocates and Solicitors.

Ms Kwa graduated in 1979 from the National University of Singapore and was called to the Singapore Bar in 1980. She has been in active practice with the firm for over 40 years, and her practice spans various aspects of law. Although her pet area of practice is real estate, Ms Kwa also advises on loans, trusts, wills, probates, joint ventures and cross border transactions.

Ms Kwa also holds various positions outside her legal practice, including directorships in Jurong Town Corporation, Mapletree Commercial Trust. In the health sector, she is a Trustee of the Singapore Cardiac Society.

Ms Kwa was awarded the Ministry of Education "Service to Education" Award and the Ministry of Health 5 years Appreciation Service Award.

11.

## ABDUL WAHAB BIN MOHAMED YUSOFF

Mr Wahab is a Non-Executive Director of CAG. He was appointed to the Board on 1 October 2019.

Mr Wahab holds the position of Vice President – Asia Pacific & Japan at Delinea, formed from established leaders in Privileged Access Management – Thycotic and Centrify. Delinea is a leading provider of cloud-ready privileged access management (PAM) solutions that empower cybersecurity for the modern, hybrid enterprise.

With over 30 years of experience in the information technology, computer and cybersecurity fields, Mr Wahab has held various leadership roles in companies that are focused on helping multinational corporations establish and grow their operations in the Asia Pacific region.

Prior to joining Delinea, Mr Wahab was Vice President, APJ of Forescout Technologies Pte Ltd from 2017 to 2021, Vice President and General Manager of Palo Alto Networks ASEAN from 2015 to 2017. He also held the role of Vice President, South Asia of McAfee & Intel Security from 2009 to 2015 and was EMC Computer Systems, South Asia's Vice President and General Manager from 2003 to 2009.



## 12.

Mr Wahab is presently a Board of Director of Singapore Civil Service College (CSC) and EZ-Link Pte Ltd., as well as Board Member of Workforce Singapore (WSG) and National Arts Council (NAC). He is also Non-Executive Director of Rekanext Capital Partners Pte Ltd (a venture capital fund focused on ASEAN pre-series start-ups), and a member of Singapore's Future Economy Council (FEC) and Kaplan Industry Advisory Board (IT and Engineering).

Mr Wahab holds a Bachelor of Engineering degree from the National University of Singapore and is a graduate of INSEAD's International Executive Programme.

**KEE TECK KOON**

Mr Kee is a Non-Executive Director of CAG. He was appointed to the Board on 1 March 2020.

Mr Kee is the Deputy Chairman of NTUC Enterprise Co-operative Limited, the holding entity of NTUC FairPrice Group, NTUC Income, NTUC First Campus, NTUC Health, and three others.

He is the Chairman of NTUC FairPrice Group and a director of NTUC Income. He also holds directorship appointments at CapitaLand Investment Limited, Mandai Park Holdings, and Trust Bank Singapore Limited. In addition, he serves on the Angsana Fund Investment Committee (AFIC) of the Singapore Labour Foundation.

He was awarded the Public Service Star Medal (BBM), and the NTUC Meritorious Service Award, both in 2021.

Mr Kee holds a Master of Arts in Engineering Science from Oxford University, UK.

## 13.

**MARK YEO**

Mr Yeo is a Non-Executive Director of CAG. He was appointed to the Board on 1 April 2021.

Mr Yeo sits on the Boards of Keppel Infrastructure Trust as well as Ireit Global, both of which are listed on SGX. Prior to his current appointments, Mr Yeo was Director on the Board of CAI and held non-executive directorship on the Boards of Cityspring Infrastructure Trust, Singapore Cruise Centre and Singapore Expo/Singex.

Mr Yeo has held various senior banking positions working on the infrastructure sector in Asia, Europe and Latin America, mainly doing project finance advisory. He was based both in Singapore and London. Thereafter, he held several leadership positions in corporates in Asia and the Middle-East. He started his career in the Singapore civil service.

Mr Yeo graduated with a Master of Arts from the University of Oxford and a Master of Laws from the National University of Singapore. He is also a Barrister of Gray's Inn and attended the Advanced Management Programme with Insead.

# EXECUTIVE MANAGEMENT TEAM



1



2



3



4



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6

- 1 **Lee Seow Hiang**  
Chief Executive Officer
- 2 **Lim Peck Hoon**  
Executive Vice President,  
Commercial
- 3 **Ng Lai Leng**  
Chief Financial Officer  
Executive Vice President,  
Corporate;  
Executive Vice President,  
Enterprise Performance &  
Development
- 4 **Tan Lye Teck**  
Executive Vice President,  
Airport Management
- 5 **Yam Kum Weng**  
Executive Vice President,  
Airport Development
- 6 **Eugene Gan**  
Chief Executive Officer,  
Changi Airports  
International



# MANAGEMENT TEAM

## CHANGI AIRPORT GROUP

### Ang Cheng Nam

Senior Vice President  
Changi East Safety

### Ang Siew Min

Senior Vice President  
Development Operations

### Chan Boon Seng

Group Project Director  
Changi East Construction

### Chua Siew Hwi

Senior Vice President  
Enterprise Performance

### Chung Choon San

Group Project Director  
Changi East Construction

### James Fong

Chief Executive Officer  
Jewel Changi Airport Development

### Goh Hwai Kar

Senior Vice President  
People Services & Rewards

### Jayson Goh

Managing Director  
Airport Operations Management

### Hung Jean

Group Senior Vice President  
Enterprise Digital Ecosystem & Business

### Koh Miaw Ling

Senior Vice President  
T5 Building

### Koh Ming Sue

Managing Director  
Engineering & Development

### Leck Siew Leng

Senior Vice President  
Internal Audit

### Alvin Lee

Chief  
Airport Emergency Service

### Audrey Lee

Group Senior Vice President  
Regulatory & Economic Affairs

### Jacqueline Lee

Senior Vice President  
Changi East Programme Management Office

### Leong How Yin

Group Project Director  
Changi East Planning, Design & Construction

### Leong Yuh Khee

Senior Vice President  
Corporate IT & Technology

### Leslie Pakianathan

Project Director  
Tunnel Construction Management

### Albert Lim

Group Senior Vice President  
Passenger Experience

### Lim Ching Kiat

Managing Director  
Air Hub Development

### Ling Ming Koon

Senior Vice President  
Airport Operations Planning & Strategy  
Senior Vice President  
Airside Operations

### Jeffrey Loke

Senior Vice President  
Pricing & Commercial Strategy

### Jessie Loong

Group Senior Vice President  
Legal & Compliance

### Jeffrey Ng

Senior Vice President  
Air Hub Strategy

### Matthew Ngan

Senior Vice President  
Changi East Mechanical & Electrical

### Ong Chee Chiau

Group Senior Vice President  
Changi East T5 Planning

### Ong Sim Lian

Group Senior Vice President  
Design Management

### Poh Li San

Senior Vice President  
Changi East T5 Planning

### Alan Xavier Tan

Senior Vice President  
Aerodrome Safety & Aviation Security

### Tan Boon Seng

Project Director  
Project Control

### Ivan Tan

Group Senior Vice President  
Corporate & Marketing Communications

### Justina Tan

Managing Director  
People

### Tan Kok Siong

Project Director  
Changi East Construction

### Teng Hwee Onn

Senior Vice President  
Engineering Management & Systems Planning

### Teo Chew Hoon

Managing Director  
Airside Concessions

### Wen Dazhi

Senior Vice President  
Tunnel Design Management

### Ivy Wong

Senior Vice President  
Enterprise Strategy & Development

### Yeo Kia Thye

Managing Director  
Airport Operations Planning & Airside

## CHANGI AIRPORTS INTERNATIONAL (MANAGEMENT COMMITTEE)

### Lau Ban Kiong

Managing Director  
Changi Airport Planners & Engineers

### Lim Wee Ping

Managing Director  
Consulting Businesses

### Ng Kuan Luen

Director  
Portfolio Strategy

### Oon Wei Ying

Director  
Operations

### Tan Ee

Chief Financial Officer

# CORPORATE GOVERNANCE

The Board and Management of CAG ('the Company') are deeply committed to our Company's core value – integrity – which is at the heart of everything we do. We strive to meet and maintain the highest standards of corporate governance, professionalism and integrity, to build a company our stakeholders can be proud of. To operate a sustainable business over the long term and to uphold and protect the Company's brand and reputation, we strongly believe in being accountable to our immediate business and regulatory environment, as well as to the global community.

The Company's Code of Conduct sets out the principles and standards of conduct that it expects of all employees in their day-to-day activities and in the decisions they make. The Company also promotes a 'speak up' culture through its whistle-blowing policy, which is intended to detect and deter unethical or illegal conduct, while protecting whistle-blowers from retaliation.

## THE BOARD OF DIRECTORS

1. The Company's Board of Directors is our highest decision-making body. It oversees the Company's long-term strategies and provides guidance to Management for the long-term performance and financial soundness of the CAG Group ('the Group'), while safeguarding the interests of stakeholders.

### Composition and balance

2. Headed by Non-Executive Chairman, Mr Tan Gee Paw, the Board currently comprises

13 Directors (including an alternate director). Mr Lee Seow Hiang, our CEO, is the only executive member of the Board. The rest of our Board members are independent. Our Directors are individuals with broad and diverse expertise and experience.

3. The Board Directors of the Company are/were:
  - i. Mr Tan Gee Paw – Chairman
  - ii. Mr Lee Seow Hiang – CEO
  - iii. Mrs Tan Ching Yee – Shareholder Representative (Alternate: Mr Lim Zhi Jian, up to 14 January 2022, and thereafter, Mr Titus Lee)
  - iv. Mr Mike Barclay (retired on 6 September 2021)
  - v. Professor Tan Kong Yam
  - vi. Mr Ng Chee Khern
  - vii. Mr Chia Song Hwee
  - viii. BG Kelvin Fan
  - ix. Mrs Chng Sok Hui
  - x. Ms Kwa Kim Li
  - xi. Mr Wahab Yusoff
  - xii. Mr Kee Teck Koon
  - xiii. Mr Mark Andrew Yeo

The profiles of the current Directors can be found on pages 38 to 43 of this annual report. Changi Airports International Pte Ltd (CAI), a wholly-owned subsidiary of the Company, has a separate Board of Directors, the majority of whom are also independent.

4. The roles of the Chairman and the CEO are separate and distinct. The Chairman leads the Board and facilitates effective and comprehensive Board discussions and decision-making on strategic issues, while the CEO has full

executive responsibility for the management of the Company's businesses and implementation of the Group's strategies and policies.

5. Ten committees have been formed to assist the Board in the detailed consideration of various matters. These are the Executive Committee (EXCO), Executive Resource and Compensation Committee (ERCC), Audit Committee (AC), Tenders Committee (TC), Executive Committee on Airport Development (ECAD), Operational Risk and Safety Committee (ORSC), Nominating Committee (NC), Capital Management Committee (CMC), Technology & Systems Committee (TSC) (previously known as Technology Development Committee) and Terminal 5 Negotiations Committee (T5NC). Each committee is governed by its own terms of reference, which set out the scope of the committee's authority, duties and responsibilities. Ad-hoc committees are also formed from time to time to review specific issues.
6. The Board meets at least four times a year.

### Access to information

7. Prior to each Board Meeting and when necessary, the Board is provided with pertinent information – including updates on the Company's operating and financial key performance indicators, regulatory, industry and other significant developments relating to the Group – to enable the

<sup>1</sup> The T5NC is an ad-hoc committee, established to oversee the negotiation process and recommend the final terms and quantum of compensation associated with the demobilisation of the Terminal 5 design and engineering consultants arising in relation to the delays and changes brought by Covid-19. It consists of one Director (Mr Kee Teck Koon, Chairman) and two non-voting co-opted members (Ms Patricia Chia and Mr Lee Chuan Seng).



Board to make informed and sound decisions. The Board has full access to the Senior Management team and the Company Secretary. Should the Directors require independent professional advice on matters relating to the businesses or issues affecting their duties, the Company will, at its expense, arrange for the appointment of relevant professional advisors.

## CAPITAL & INVESTMENTS

1. The EXCO comprises the following Directors:
  - i. Mr Tan Gee Paw – Chairman
  - ii. Mrs Tan Ching Yee
  - iii. Mr Chia Song Hwee
  - iv. Professor Tan Kong Yam
  - v. Mr Lee Seow Hiang
2. The EXCO reviews and recommends to the Board financing and investment strategies of the Group and approves significant investments by the Company and CAI. The EXCO also approves treasury matters such as the acceptance of banking and credit facilities, granting of corporate guarantees, debt capital market issuances, opening of bank accounts as well as hedging policies. The EXCO also sets the financial limits for the operational, procurement and treasury activities of the Company.
3. The Company had expected to take on significant debt in the coming years to finance the development of Changi East. To that end, the CMC was established at the end of 2018 to provide specific oversight in

the area of capital management. However, in light of the pause in the development of Changi East, a decision was taken to suspend the CMC on 21 October 2020 until further notice.

4. The suspended CMC comprises the following Directors:
  - i. Mr Chia Song Hwee – Chairman
  - ii. Mr Lim Zhi Jian (resigned on 14 January 2022)
  - iii. Mr Titus Lee (appointed with effect from 15 January 2022)
  - iv. Mrs Chng Sok Hui
  - v. Mr Lee Seow Hiang
5. It was intended that the CMC would review and recommend to the Board and/or EXCO the financing strategies and plans of the Company (debt capital market issuances and bank facilities), as well as guide and advise Management on the financing execution strategy.

## EXECUTIVE RESOURCE AND COMPENSATION

1. The ERCC comprises the following Directors:
  - i. Mr Tan Gee Paw – Chairman
  - ii. Mr Chia Song Hwee
  - iii. Mr Kee Teck Koon
2. The ERCC supports and advises the Board on remuneration matters, leadership succession and development. The responsibilities of the ERCC include:
  - i. reviewing and approving the policy for determining executive remuneration, including the remuneration

- packages, service contract terms and benefits programme for key management executives;
- ii. approving the appointment of key management executives, overseeing their development and reviewing succession plans to ensure a strong pipeline of talent to enable the continued success of the Company; and
- iii. recommending the remuneration framework, including fees for non-executive Directors.

## ACCOUNTABILITY AND AUDIT

### Accountability

1. Management provides all members of the Board with reports on operating and financial information and key performance indicators on a quarterly basis and as the Board may require from time to time, to enable the Board to make balanced and informed assessments of the Company's performance, position and prospects.

### Audit matters

2. The AC comprises the following Directors:
  - i. Mrs Chng Sok Hui – Chairman
  - ii. Mrs Tan Ching Yee
  - iii. BG Kelvin Fan
3. The main responsibilities of the AC are to assist the Board in discharging its statutory and other responsibilities relating to the Company's internal controls, financial and accounting matters, compliance, and business and financial risk management.

# CORPORATE GOVERNANCE

4. The AC is responsible for reviewing the effectiveness of financial, compliance and risk management frameworks, as well as the robustness of the reporting and disclosure processes. The AC also reviews the adequacy of whistle-blowing arrangements implemented by the Company through which employees, partners, suppliers and contractors can raise concerns in confidence about possible improprieties in matters of financial reporting or other matters. All whistle-blowing complaints are reviewed by the AC to ensure independent and thorough investigation, and adequate follow-up and resolution of the matters reported. The AC also provides oversight for the effectiveness of the Company's anti-bribery management system.
5. The AC performs independent review of the financial statements of the Company, and reviews the key areas of management judgment applied for adequate disclosure, critical accounting policies and any significant changes that would have a material impact on the financial statements.
6. The AC reviews the adequacy and effectiveness of the internal audit function and its processes, as well as ensures it is adequately resourced to carry out its function effectively. The AC reviews the Internal Audit (IA) Division's plans, its effectiveness and audit scope, and also approves its budget. The AC receives reports from IA at the completion of each audit, and at each AC meeting,

IA provides the AC with updates on the key findings from the audit reviews, and the remediation actions which have been or will be taken to address these findings, and an overview of the resolution of the audit issues (including current and past-due issues) to verify the effectiveness and timeliness of actions taken by Management on the internal auditors' recommendations and observations. Any changes to the audit plan will also be tabled for AC approval at the AC meetings.

7. The AC reviews and approves the external audit plan, the scope and results of the external audit. The AC also reviews the external audit reports to ensure that significant findings and observations regarding control weaknesses are promptly rectified. Prior to making recommendations to the Board on the external auditor's appointment or reappointment, the AC reviews the external auditor's independence, objectivity and quality of work based on the Audit Quality Indicators Disclosure framework established by the Accounting and Corporate Regulatory Authority. In line with best practice, the external audit partner is rotated every five years. The AC also reviews the non-audit fees awarded to the external auditors to ensure that the non-audit services performed by them would not affect their independence.
8. The AC meets with the internal and/or external auditors three times during the year. At least one of these meetings is

conducted without the presence of Management, where the auditors may raise issues encountered in the course of their work directly to the AC.

## INTERNAL CONTROLS

1. The Board and Management of the Company are fully committed to maintaining a robust system of internal controls, procedures and risk management to safeguard our shareholder's interests and the Group's assets. The Board delegates its oversight responsibilities for internal controls, financial and strategic (business) risk management and compliance matters to the AC, which ensures the effectiveness and adequacy of the system of internal controls in the Company, while the ORSC assists the Board in reviewing the operational and safety risk management and compliance systems put in place by Management.
2. The internal controls established by the Company are supported by systems, processes and people. The Company's three lines of defence for risk management are as follows:
  - i. the first line of defence is the business units who are responsible for identifying and managing risks inherent in their businesses;
  - ii. the second line of defence comprises the oversight and control functions such as Enterprise Risk Management (ERM), Legal & Compliance, Aerodrome Safety, Aviation Security, Cybersecurity &



- Digital Governance, and Enterprise Performance; and
- iii. the third line of defence is IA, which provides an independent assessment and assurance on the reliability, adequacy and effectiveness of the Company's system of internal controls, risk management procedures, governance framework and processes.
  3. The Company's internal and external auditors review its key internal controls for material non-compliance or failures in internal controls and recommend areas of improvements. The AC also reviews the effectiveness of the actions taken by Management in response to the recommendations made.
  4. The AC also reviews the effectiveness of the enterprise risk management framework and the risk management processes put in place to manage financial and strategic (business) risks while meeting business objectives. Control self-assessments in key areas of the Group's businesses/operations are conducted by Management on a periodic basis to evaluate the adequacy and effectiveness of the risk management and internal control systems.
  5. As part of the Company's anti-bribery management system, all employees undergo annual anti-bribery training, and divisions perform identification and assessment of bribery risk annually and put in place appropriate mitigating measures. Employees in

sensitive positions are also required to submit declarations relating to anti-bribery compliance yearly.

6. A separate TC evaluates and approves the award of tenders for goods and services exceeding S\$50 million in value, except for those related to new development projects and major redevelopment projects at Changi Airport which come under the purview of the ECAD. The TC comprises the following Directors:
  - i. Mr Mike Barclay – Chairman (retired on 6 September 2021)
  - ii. Mr Ng Chee Khern – Chairman (appointed with effect from 7 September 2021)
  - iii. Ms Kwa Kim Li
  - iv. Mr Lee Seow Hiang

#### Internal audit

7. IA assists the AC to ensure that the Company maintains sound risk management and internal control systems. IA is independent of the activities it audits. It conducts regular audits of high-risk areas, and undertakes investigations as directed by the AC. It comprises suitably qualified and experienced staff, headed by the Senior Vice President, Internal Audit (SVP, IA). SVP, IA reports functionally to the Chairman of the AC, and administratively to the CEO. To ensure the independence of the IA function, the IA team has unrestricted access to the AC.
8. IA adopts a risk-based approach in formulating its annual audit plan that aligns its activities to the key risks across

the Company's businesses, focusing on key internal controls, including financial, operational and compliance controls. The annual audit plan is developed in consultation with, but is independent of, Management and is approved by the AC. IA also works closely with Management to provide internal consulting and control advisory to promote effective risk management, robust internal control and good governance practices in the development of new services/products and implementation of new/enhanced systems and processes. Internal audit practices are also guided by the International Standards for the Professional Practice of Internal Auditing set by the Institute of Internal Auditors. IA also harnesses technology to maximise efficiencies in the way it audits, through robust use of analytics and continuous auditing.

9. IA's assessments on the adequacy and effectiveness of internal controls over processes/systems across the businesses are reported to the AC, and a summary of key findings and recommendations are also discussed at the AC meetings. IA also tracks and reports to the AC on the implementation status of actions agreed by Management, so as to ensure prompt and adequate closure of audit observations.

#### AIRPORT DEVELOPMENT

1. The ECAD currently comprises three Directors, and nine non-voting co-opted members who provide additional advice

# CORPORATE GOVERNANCE

and expertise in relation to the development projects.

2. The three Directors are:

- i. Mr Tan Gee Paw – Chairman
- ii. Mr Lim Zhi Jian  
(resigned on 14 January 2022)
- iii. Mr Titus Lee (appointed with effect from 15 January 2022)
- iv. Mr Lee Seow Hiang

3. The nine non-voting co-opted members are:

- i. Professor Lui Pao Chuen
- ii. Ms Patricia Chia
- iii. Mr Chua Hua Meng
- iv. Mr Goh Hup Chor
- v. Mr Lim Bok Ngam
- vi. Mr Tham Kui Seng
- vii. Mr Lai Huen Poh
- viii. Mr Lee Chuan Seng
- ix. Mr Lee Kut Cheung

4. The ECAD oversees new development and major redevelopment projects at Changi Airport. The responsibilities of the ECAD include:

- i. reviewing and approving collaborations, selection of consultants, architects and other professional advisors, design concepts, aesthetic element proposals and other proposals related to development projects at Changi Airport; and
- ii. reviewing and approving tenders for goods and services exceeding S\$50 million related to development projects at Changi Airport.

## NOMINATING COMMITTEE

1. Established at the end of 2018, the NC comprises the following Directors:

- i. Mr Tan Gee Paw – Chairman
- ii. Mrs Tan Ching Yee
- iii. Mr Chia Song Hwee
- iv. Ms Kwa Kim Li

2. The NC assists the Board in reviewing the structure, size, composition, core competencies and skills required by the Board and its committees to support the strategic objectives and values of the Company, and makes relevant recommendations to the Board.

## TECHNOLOGY & SYSTEMS COMMITTEE

1. The TSC comprises five Directors and one non-voting member who has been co-opted to provide additional advice and expertise, as follows:

- i. Mr Ng Chee Khern – Chairman
- ii. Mr Chia Song Hwee
- iii. Mr Lim Zhi Jian  
(resigned on 14 January 2022)
- iv. Mr Titus Lee (appointed with effect from 15 January 2022)
- v. Mr Wahab Yusoff
- vi. Mr Lee Seow Hiang
- vii. Professor Lui Pao Chuen  
(co-opted member)

2. The TSC provides guidance to Management on technology-driven innovation, as well as the development of technological capabilities in support of the Company's transformation. It also guides the Company on its strategy for the procurement of technology, co-development of solutions and investments into start-ups with promising new technologies.





# ENTERPRISE RISK MANAGEMENT

1. CAG continued to strengthen its risk governance. It stayed steadfast to its commitment to minimise the materialisation of risk in its operations and keep the impact of damage to as low as possible by identifying potential risks early and mitigating them with the appropriate strategies.
2. In financial year 2021/22, the global situation remained volatile with the emergence of new variants of the Covid-19 virus and rising geopolitical tension, including the Russia-Ukraine conflict. CAG's Enterprise Risk Management (ERM) team intensified its global risk scanning efforts for emerging risks. It delivered a bi-weekly report for risk owners to ensure that CAG's investments and projects had reviewed all potential risks, and that airport operations were kept safe, secure, and efficient.
3. To achieve greater synergy, the risk management function of the Changi East development programme, comprising the future Terminal 5 (T5), connecting tunnels, and the three-runway system, was merged into the Group ERM function in January 2022. The move enabled CAG to achieve a more comprehensive view of the risk landscape, better align its risk mitigation strategies, and apply the risk knowledge gained from managing CAG's existing terminals to the new T5. The ERM team continued to oversee the risk function for the Changi East project to ensure that risk factors in the design and construction phases, such as safety, operations, scheduling, and cost, were mitigated to achieve an optimal outcome for the project.

## RISK GOVERNANCE

4. Both the Board and Management are responsible for the management of risks in CAG. The Board, through the Operational Risk & Safety Committee (ORSC), provides oversight on operational and safety risks, while the review of the Company's financial and strategic risks is overseen by the Audit Committee (AC).
5. The ORSC comprises three Directors and two co-opted members, who provide additional advice and expertise to the committee. In November 2021, BG Kelvin Fan took over as the Chairman of ORSC from Mr Mike Barclay. The latter remained in the Committee to provide advice.
6. The three Directors are:  
BG Kelvin Fan – Chairman  
Ms Kwa Kim Li  
Mr Wahab Yusoff  
  
The two co-opted members are:  
Mr Mike Barclay  
Mr Wong Woon Liong

7. The Board Committees work with the Management to ensure effective allocation of resources to create and protect CAG's assets and value. At the Management level, the Management Risk Committee (RC) is responsible for monitoring the risk management and internal control systems, and ensuring that emerging risks are managed appropriately. The RC is chaired by the CEO and comprises Senior Management members of the Company. It meets regularly to review the Company's key risks and provides strategic guidance to reinforce the implementation of ERM in the Company.

## RISK AWARENESS CULTURE

8. Risk management remained an integral part of CAG's culture across all levels of staff. Every employee is to function as a risk managers for his or her own area of work, by being vigilant and reporting risks in a timely manner. Plans to roll out customised training programmes to scale up organisational risk capabilities were ongoing.
9. The ERM team continued to meet with business owners regularly to ensure that risks were adequately addressed. It was involved in key committees such as the Information Assurance Committee and the Safety Committee. It also worked alongside the airport operations team to ensure that airport partners were prepared for travel resumption and provided advisory for CAG's overseas business against a challenging global climate.

## STRENGTHENING CYBERSECURITY

10. CAG has incorporated cybersecurity in its risk management framework by adopting a risk-based approach towards cybersecurity. Its proprietary cybersecurity awareness programme, mandated throughout the organisation, is continuously refreshed and updated to address the latest threat landscape. CAG was one of the first international airports to achieve ISO27001 certification for its critical airport operations, demonstrating that it had met international standards in managing information security. It continued to strengthen its digital security and resilience to ensure a safer cyberspace for customers and passengers.

# GROUP FINANCIAL SUMMARY

**The Group Financial Summary** as set out on pages 52 to 68 contains only a summary of the information extracted from the Statement by Directors and the audited consolidated financial statements of Changi Airport Group (Singapore) Pte. Ltd. and its subsidiaries for the financial year ended 31 March 2022.

For a full understanding of the state of affairs of the Company and the Group as at 31 March 2022 and of the results of the Group for the financial year ended 31 March 2022, the Group Financial Summary should be read in conjunction with the audited consolidated financial statements and the audit report thereon, which can be obtained via the Company's website (<http://www.changiairportgroup.com>).

<b>53</b>	Directors' Statement	<b>63</b>	Consolidated Statement of Changes in Equity
<b>55</b>	Independent Auditor's Report	<b>64</b>	Consolidated Statement of Cash Flows
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# DIRECTORS' STATEMENT

For The Financial Year Ended 31 March 2022

The directors present their statement to the member together with the audited financial statements of the Group for the financial year ended 31 March 2022 and the balance sheet of the Company as at 31 March 2022.

In the opinion of the directors,

- (a) the balance sheet of the Company and the consolidated financial statements of the Group as set out on pages 9 to 80\* are drawn up so as to give a true and fair view of the financial position of the Company and of the Group as at 31 March 2022 and the financial performance, changes in equity and cash flows of the Group for the financial year covered by the consolidated financial statements; and
- (b) at the date of this statement, there are reasonable grounds to believe that the Company will be able to pay its debts as and when they fall due.

## DIRECTORS

The directors of the Company in office at the date of this statement are as follows:

Mr Tan Gee Paw	Chairman
Mr Lee Seow Hiang	Chief Executive Officer
Mr Abdul Wahab Bin Mohamed Yusoff	
Mr Chia Song Hwee	
Mrs Chng Sok Hui	
Mr Kelvin Fan Sui Siong	
Mr Kee Teck Koon	
Ms Kwa Kim Li	
Mr Mark Yeo	
Mr Ng Chee Khern	
Mrs Tan Ching Yee	
Mr Tan Kong Yam	
Mr Titus Lee	(Alternate director to Mrs Tan Ching Yee appointed on 15 January 2022)

## ARRANGEMENTS TO ENABLE DIRECTORS TO ACQUIRE SHARES AND DEBENTURES

Neither at the end of nor at any time during the financial year was the Company a party to any arrangement whose object was to enable the directors of the Company to acquire benefits by means of the acquisition of shares in, or debentures of, the Company or any other body corporate.

## DIRECTORS' INTERESTS IN SHARES OR DEBENTURES

According to the register of directors' shareholdings, none of the directors holding office at the end of the financial year had any interest in the shares or debentures of the Company or its related corporations.

\* These page numbers refer to the pages in the full set of consolidated financial statements.

# DIRECTORS' STATEMENT

For The Financial Year Ended 31 March 2022

## SHARE OPTIONS

There were no options granted during the financial year to subscribe for unissued shares of the Company.

No shares have been issued during the financial year by virtue of the exercise of options to take up unissued shares of the Company.

There were no unissued shares of the Company under option at the end of the financial year.

## INDEPENDENT AUDITOR

The independent auditor, PricewaterhouseCoopers LLP, has expressed its willingness to accept re-appointment.

On behalf of the Board of Directors

**Tan Gee Paw**

Chairman

**Lee Seow Hiang**

Chief Executive Officer

9 June 2022

# INDEPENDENT AUDITOR'S REPORT

To The Member Of Changi Airport Group (Singapore) Pte. Ltd.

## REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

### Our Opinion

In our opinion, the accompanying consolidated financial statements of Changi Airport Group (Singapore) Pte. Ltd. (the "Company") and its subsidiaries (the "Group") and the balance sheet of the Company are properly drawn up in accordance with the provisions of the Companies Act 1967 (the "Act") and Singapore Financial Reporting Standards (international) ("SFRS(I)s") so as to give a true and fair view of the consolidated financial position of the Group and the financial position of the Company as at 31 March 2022 and of the consolidated financial performance, consolidated changes in equity and consolidated cash flows of the Group for the financial year ended on that date.

### *What we have audited*

The financial statements of the Company and the Group comprise:

- the consolidated income statement of the Group for the financial year ended 31 March 2022;
- the consolidated statement of comprehensive income of the Group for the financial year ended 31 March 2022;
- the balance sheets of the Company and the Group as at 31 March 2022;
- the consolidated statement of changes in equity of the Group for the financial year then ended;
- the consolidated statement of cash flows of the Group for the financial year then ended; and
- the notes to the financial statements, including a summary of significant accounting policies.

### Basis for Opinion

We conducted our audit in accordance with Singapore Standards on Auditing ("SSAs"). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### *Independence*

We are independent of the Group in accordance with the Accounting and Corporate Regulatory Authority Code of Professional Conduct and Ethics for Public Accountants and Accounting Entities ("ACRA Code") together with the ethical requirements that are relevant to our audit of the financial statements in Singapore, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ACRA Code.



# INDEPENDENT AUDITOR'S REPORT

To The Member Of Changi Airport Group (Singapore) Pte. Ltd.

## Our Audit Approach

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the accompanying financial statements. In particular, we considered where management made subjective judgements; for example, in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain. As in all of our audits, we also addressed the risk of management override of internal controls, including among other matters consideration of whether there was evidence of bias that represented a risk of material misstatement due to fraud.

## Key Audit Matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements for the financial year ended 31 March 2022. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key Audit Matter	How our audit addressed the Key Audit Matter
<p><b>Impairment of intangible assets</b></p> <p><i>Refer to Note 3(ii)* to the financial statements.</i></p> <p>The Group had intangible assets relating to the infrastructure and concession right assets arising from the concession agreement to operate the Antonio Carlos Jobim International (Galeão) Airport in Rio de Janeiro, Brazil. As at 31 March 2022, the carrying value of the concession right amounted to \$3,022,255,000 (2021: \$2,320,140,000). The entity which holds these assets, Concessionaria Aeroporto Rio de Janeiro S.A ("CARJ"), was deconsolidated on 31 March 2022 (Note 15*).</p> <p>As operations in Galeão Airport have been affected by the challenging business environment in Brazil and the Covid-19 pandemic, management performed an impairment review of the intangible assets held by CARJ as at 31 March 2022.</p>	<p>In respect of the inputs which were most sensitive to the estimation of the value-in-use of the concession asset, we involved our valuation specialists to evaluate the valuation methodology and management's assumptions applied based on the information and market conditions prevailing at the date of this report, as follows:</p> <ul style="list-style-type: none"> <li>• Net cash flows from operations of CARJ;</li> <li>• Amount of government support that CARJ is expected to receive during the re-auction period; and</li> <li>• Net amount of payments that CARJ is contractually entitled to receive upon completion of the re-auction.</li> </ul> <p>In respect of the independent valuation expert engaged by the Group, we assessed that they possessed the requisite competency and experience to assist management in the assessment of the recoverable amount of the concession asset.</p>

# INDEPENDENT AUDITOR'S REPORT

To The Member Of Changi Airport Group (Singapore) Pte. Ltd.

## Our Audit Approach (continued)

### Key Audit Matters (continued)

Key Audit Matter	How our audit addressed the Key Audit Matter
<p><b>Impairment of intangible assets (continued)</b></p> <p><i>Refer to Note 3(ii)* to the financial statements. (continued)</i></p> <p>Management engaged an independent consultant to assess the value-in-use of the assets using the Expected Cash Flows over the period which the re-auction process is expected to be completed.</p> <p>Arising from the impairment assessment, an impairment loss of \$12,176,000 (2021: \$442,076,000) was recognised in the profit or loss for the financial year ended 31 March 2022.</p> <p>The assessment of impairment of the concession assets was an area of focus as significant judgements were used to estimate the key inputs used in each scenario, such as the net cash flows from operations of CARJ, amount of government support that CARJ is expected to receive during the re-auction process, as well as the net amount of payments that CARJ is contractually entitled to receive upon completion of the re-auction.</p>	<p>We considered the cash flow scenario and assessed management's expectations, the estimated timeline for the completion of the re-auction and the estimated net amount of payments to be received by CARJ upon completion of the re-auction in relation to the concession agreement. We also considered sensitivity analysis performed by the independent valuation expert on the discount rate and projected EBITDA and noted that reasonably possible changes to these factors would not result in material additional impairment loss as at 31 March 2022.</p> <p>We also considered the adequacy of the Group's disclosures (in Notes 3(ii) and 16*) made in relation to the impairment assessment performed.</p> <p>Based on our audit procedures performed, we found management's key judgements and basis of assessing the recoverable amount of the concession asset to be reasonable. We also found the disclosures in the financial statements in respect of the key judgements and sources of estimation uncertainty to be adequate.</p>

\* These references are made in relation to the full set of consolidated financial statements.

## Other Information

Management is responsible for the other information. The other information comprises the Directors' Statement (but does not include the financial statements and our auditor's report thereon), which we obtained prior to the date of this auditor's report, and the other sections of the annual report ("the Other Sections"), which are expected to be made available to us after that date.

Our opinion on the financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed on the other information that we obtained prior to the date of this auditor's report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

When we read the Other Sections, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance and take appropriate actions in accordance with SSAs.

# INDEPENDENT AUDITOR'S REPORT

To The Member Of Changi Airport Group (Singapore) Pte. Ltd.

## **Responsibilities of Management and Directors for the Financial Statements**

Management is responsible for the preparation of financial statements that give a true and fair view in accordance with the provisions of the Act and SFRS(I)s, and for devising and maintaining a system of internal accounting controls sufficient to provide a reasonable assurance that assets are safeguarded against loss from unauthorised use or disposition; and transactions are properly authorised and that they are recorded as necessary to permit the preparation of true and fair financial statements and to maintain accountability of assets.

In preparing the financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The directors' responsibilities include overseeing the Group's financial reporting process.

## **Auditor's Responsibilities for the Audit of the Financial Statements**

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SSAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.



# INDEPENDENT AUDITOR'S REPORT

To The Member Of Changi Airport Group (Singapore) Pte. Ltd.

## Auditor's Responsibilities for the Audit of the Financial Statements (continued)

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the directors with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

## REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

In our opinion, the accounting and other records required by the Act to be kept by the Company and by those subsidiary corporations incorporated in Singapore of which we are the auditors, have been properly kept in accordance with the provisions of the Act.

The engagement partner on the audit resulting in this independent auditor's report is Kok Moi Lre.

PricewaterhouseCoopers LLP  
Public Accountants and Chartered Accountants  
Singapore, 9 June 2022

# CONSOLIDATED INCOME STATEMENT

For The Financial Year Ended 31 March 2022

	Group	
	2022	2021
	\$'000	\$'000
Revenue	944,140	696,748
Expenses		
– Depreciation	(703,369)	(684,216)
– Amortisation of intangible assets	(12,415)	(11,585)
– Maintenance of land, buildings and equipment	(210,779)	(201,110)
– Services and security related expenses	(156,093)	(145,858)
– Employee compensation	(234,914)	(164,881)
– CAAS services and licence fees	(5,846)	(20,566)
– Property tax	(26,296)	(83,036)
– Other operating expenses	(176,142)	(121,312)
Total expenses	(1,525,854)	(1,432,564)
<b>Operating loss</b>	<b>(581,714)</b>	<b>(735,816)</b>
Finance expenses	(259,107)	(350,336)
Other income and losses – net	164,776	254,402
Impairment of intangible assets	(12,176)	(442,076)
Loss on deconsolidation of a subsidiary	(127,963)	–
Write-down of investment in joint venture	(200,572)	–
Share of results of associated companies and joint ventures	21,515	(30,736)
<b>Loss before tax</b>	<b>(995,241)</b>	<b>(1,304,562)</b>
Income tax credit	48,112	44,035
<b>Loss after tax</b>	<b>(947,129)</b>	<b>(1,260,527)</b>
<b>Loss after tax attributable to:</b>		
Equity holder of the Company	(837,626)	(953,722)
Non-controlling interests	(109,503)	(306,805)
	<b>(947,129)</b>	<b>(1,260,527)</b>

# CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

For The Financial Year Ended 31 March 2022

	Group	
	2022 \$'000	2021 \$'000
<b>Loss after tax</b>	<b>(947,129)</b>	<b>(1,260,527)</b>
<b>Other comprehensive income/(loss):</b>		
<i>Items that will not be reclassified to income statement:</i>		
Currency translation losses arising on consolidation – Non-controlling interests	<b>(623)</b>	(19,445)
	<b>(623)</b>	(19,445)
<i>Items that may be reclassified subsequently to income statement:</i>		
Cash flow hedges		
– Fair value gains/(losses)	<b>10,495</b>	(6,431)
– Reclassification	<b>5,515</b>	4,466
– Share of fair value (losses)/gains from an associated company	<b>(2,875)</b>	9,715
Share of other comprehensive income of associated company		
– Losses	–	(147)
– Reclassification	<b>147</b>	–
Currency translation differences arising on consolidation		
– Losses	<b>(28,443)</b>	(25,889)
– Reclassification	<b>162,467</b>	–
	<b>147,306</b>	(18,286)
<b>Other comprehensive income/(loss), net of tax</b>	<b>146,683</b>	(37,731)
<b>Total comprehensive loss</b>	<b>(800,446)</b>	<b>(1,298,258)</b>
<b>Total comprehensive loss attributable to:</b>		
Equity holder of the Company	<b>(698,165)</b>	(971,045)
Non-controlling interests	<b>(102,281)</b>	(327,213)
	<b>(800,446)</b>	<b>(1,298,258)</b>



# BALANCE SHEETS

As At 31 March 2022

	Group		Company	
	2022	2021	2022	2021
	\$'000	\$'000	\$'000	\$'000
<b>ASSETS</b>				
<b>Current assets</b>				
Cash and cash equivalents	1,350,855	1,632,069	1,237,569	1,485,117
Trade and other receivables	195,060	134,654	186,600	94,971
Other current assets	195,428	220,939	186,568	211,628
Other investments	537,245	183,366	495,537	109,175
Inventories	9,942	15,132	6,453	6,568
Tax recoverable	–	4,710	–	–
	<b>2,288,530</b>	<b>2,190,870</b>	<b>2,112,727</b>	<b>1,907,459</b>
<b>Non-current assets</b>				
Trade and other receivables	–	–	181,384	191,779
Other non-current assets	58,049	80	84,108	23,510
Property, plant and equipment	8,033,935	7,564,557	7,996,205	7,517,746
Intangible assets	5,228	2,865,217	–	–
Right-of-use assets	1,030,960	1,087,268	1,030,845	1,087,069
Subsidiaries	–	–	333,681	467,366
Associated companies and joint ventures	27,297	212,167	13,614	12,934
Investment property	1,269,984	1,330,197	–	–
Other investments	17,937	39,730	13,855	13,639
Derivatives	4,981	–	–	–
Deferred tax assets	13,305	11,115	–	–
	<b>10,461,676</b>	<b>13,110,331</b>	<b>9,653,692</b>	<b>9,314,043</b>
<b>Total assets</b>	<b>12,750,206</b>	<b>15,301,201</b>	<b>11,766,419</b>	<b>11,221,502</b>
<b>LIABILITIES</b>				
<b>Current liabilities</b>				
Trade and other payables	805,448	799,594	922,710	916,874
Loans and borrowings	–	302,735	–	–
Lease liabilities	76,940	80,374	76,825	80,175
Deferred income	79,624	79,652	69,414	62,245
Current tax liabilities	62,695	145,856	50,441	131,656
	<b>1,024,707</b>	<b>1,408,211</b>	<b>1,119,390</b>	<b>1,190,950</b>
<b>Non-current liabilities</b>				
Trade and other payables	182,720	150,443	157,444	126,091
Concession payable	–	2,614,536	–	–
Loans and borrowings	2,016,313	1,534,073	750,000	–
Lease liabilities	1,007,670	1,041,885	1,007,670	1,041,885
Derivatives	100,000	114,308	–	–
Deferred income	2,265,297	1,533,275	2,265,297	1,506,417
Deferred tax liabilities	31,618	72,762	31,618	72,762
	<b>5,603,618</b>	<b>7,061,282</b>	<b>4,212,029</b>	<b>2,747,155</b>
<b>Total liabilities</b>	<b>6,628,325</b>	<b>8,469,493</b>	<b>5,331,419</b>	<b>3,938,105</b>
<b>NET ASSETS</b>	<b>6,121,881</b>	<b>6,831,708</b>	<b>6,435,000</b>	<b>7,283,397</b>
<b>EQUITY</b>				
Share capital and reserves	3,811,576	3,671,272	3,788,764	3,787,921
Retained profits	2,406,446	3,244,915	2,646,236	3,495,476
	<b>6,218,022</b>	<b>6,916,187</b>	<b>6,435,000</b>	<b>7,283,397</b>
Non-controlling interests	(96,141)	(84,479)	–	–
<b>Total equity</b>	<b>6,121,881</b>	<b>6,831,708</b>	<b>6,435,000</b>	<b>7,283,397</b>

# CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For The Financial Year Ended 31 March 2022

	Share capital \$'000	Hedging and other reserves \$'000	Currency translation reserve \$'000	Sinking fund reserve \$'000	Retained profits \$'000	Non-controlling interests \$'000	Total equity \$'000
<b>2022</b>							
<b>Beginning of financial year</b>	<b>3,280,387</b>	<b>12,858</b>	<b>(129,507)</b>	<b>507,534</b>	<b>3,244,915</b>	<b>(84,479)</b>	<b>6,831,708</b>
Loss for the year	–	–	–	–	(837,626)	(109,503)	(947,129)
Other comprehensive income	–	5,437	134,024	–	–	7,222	146,683
<b>Total comprehensive income</b>	<b>–</b>	<b>5,437</b>	<b>134,024</b>	<b>–</b>	<b>(837,626)</b>	<b>(102,281)</b>	<b>(800,446)</b>
Disposal of controlling interest in subsidiary (Note 15*)	–	–	–	–	–	90,619	90,619
Sinking fund contribution	–	–	–	843	(843)	–	–
<b>Total transactions with owners and other movements in equity</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>843</b>	<b>(843)</b>	<b>90,619</b>	<b>90,619</b>
<b>End of financial year</b>	<b>3,280,387</b>	<b>18,295</b>	<b>4,517</b>	<b>508,377</b>	<b>2,406,446</b>	<b>(96,141)</b>	<b>6,121,881</b>
<b>2021</b>							
<b>Beginning of financial year</b>	<b>3,280,387</b>	<b>4,292</b>	<b>(103,618)</b>	<b>506,693</b>	<b>4,199,478</b>	<b>242,734</b>	<b>8,129,966</b>
Loss for the year	–	–	–	–	(953,722)	(306,805)	(1,260,527)
Other comprehensive income	–	8,566	(25,889)	–	–	(20,408)	(37,731)
<b>Total comprehensive income</b>	<b>–</b>	<b>8,566</b>	<b>(25,889)</b>	<b>–</b>	<b>(953,722)</b>	<b>(327,213)</b>	<b>(1,298,258)</b>
Sinking fund contribution	–	–	–	841	(841)	–	–
<b>Total other movements in equity</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>841</b>	<b>(841)</b>	<b>–</b>	<b>–</b>
<b>End of financial year</b>	<b>3,280,387</b>	<b>12,858</b>	<b>(129,507)</b>	<b>507,534</b>	<b>3,244,915</b>	<b>(84,479)</b>	<b>6,831,708</b>

\* This reference is made in relation to the full set of consolidated financial statements.

# CONSOLIDATED STATEMENT OF CASH FLOWS

For The Financial Year Ended 31 March 2022

	2022 \$'000	2021 \$'000
<b>Cash flows from operating activities</b>		
Loss after tax	(947,129)	(1,260,527)
Adjustments for:		
– Income tax credit	(48,112)	(44,035)
– Depreciation	703,369	684,216
– Amortisation of intangible assets	12,415	11,585
– Government grant	(92,409)	(315,526)
– Net loss on disposal of property, plant and equipment	3,544	5,922
– Impairment of intangible assets	12,176	442,076
– Loss on deconsolidation of a subsidiary	127,963	–
– Write-down of investment in joint venture	200,572	–
– Impairment of investment property	–	7,666
– Impairment of trade and other receivables	(164)	2,477
– Share of results of associated companies and joint ventures	(21,515)	30,736
– Unrealised currency translation differences	(8,964)	(24,667)
– Loss/(gain) on financial assets held at fair value	15,905	(8,326)
– Amortisation of deferred revenue	(4,178)	(49,107)
– Finance expenses	259,107	350,336
– Interest income	(26,281)	(31,330)
– Dividend income	(552)	–
	<b>185,747</b>	<b>(198,504)</b>
Changes in working capital		
– Inventories	3,609	(1,955)
– Trade and other receivables	(86,329)	53,668
– Other assets	(74,320)	(71,093)
– Trade and other payables	(63,620)	(104,308)
Cash used in operations	<b>(34,913)</b>	<b>(322,192)</b>
Interest received	27,981	49,855
Government grants received	48,976	165,860
Income tax paid	(79,741)	(67,690)
<b>Net cash used in operating activities</b>	<b>(37,697)</b>	<b>(174,167)</b>



# CONSOLIDATED STATEMENT OF CASH FLOWS

For The Financial Year Ended 31 March 2022

	2022 \$'000	2021 \$'000
<b>Cash flows from investing activities</b>		
Additions to property, plant and equipment and capital work-in-progress	(950,582)	(1,464,289)
Additions to investment property and investment property under development	(5,463)	(24,788)
Additions to intangible assets	(11,929)	(9,577)
Payment of concession liabilities	–	(4,182)
Proceeds from disposal of property, plant and equipment	23	607
Proceeds from disposal of associated companies	–	27,742
Investment in associated companies and joint ventures	(680)	(987)
Dividends received	56,496	3,640
Placement in treasury bills	–	(55,356)
Purchase of financial assets at fair value through profit or loss	(415,059)	(2,245)
Net cash deconsolidated on loss of control of subsidiary	(2,123)	–
Proceeds from financial assets at amortised cost	–	1,000
<b>Net cash used in investing activities</b>	<b>(1,329,317)</b>	<b>(1,528,435)</b>
<b>Cash flow from financing activities</b>		
Proceeds from loans and borrowings, net of transactions costs	750,000	18,478
Repayment of loans and borrowings	(306,004)	(47,556)
Interest paid	(68,238)	(68,616)
Payment of lease principal	(37,289)	(41,906)
Designated investments / Restricted bank deposits	–	17,896
Government grants received	747,269	1,093,980
<b>Net cash provided by financing activities</b>	<b>1,085,738</b>	<b>972,276</b>
<b>Net decrease in cash and cash equivalents</b>	<b>(281,276)</b>	<b>(730,326)</b>
Cash and cash equivalents at beginning of financial year	1,631,109	2,362,566
Effects of currency translation on cash and cash equivalents	62	(1,131)
<b>Cash and cash equivalents at end of financial year</b>	<b>1,349,895</b>	<b>1,631,109</b>

# LISTING OF SIGNIFICANT COMPANIES IN THE GROUP

For The Financial Year Ended 31 March 2022

Name of companies	Principal activities	Country of business/ incorporation	Equity holding	
			31 March 2022 %	31 March 2021 %

## Significant subsidiaries

### Held by the Company:

Changi Airports International Pte. Ltd. <sup>(a)</sup>	Investment holding and provision of consultancy services in the field of civil aviation	Singapore	<b>100</b>	100
Changi Travel Services Pte. Ltd. <sup>(a)</sup>	Sale of travel and tour-related products and packages	Singapore	<b>100</b>	100
Jewel Changi Airport Holdings Pte. Ltd. <sup>(a)</sup>	Investment holding	Singapore	<b>100</b>	100
E-Concierge Pte Ltd <sup>(a)</sup>	E-commerce distribution	Singapore	<b>100</b>	100

### Held by the Group:

Changi Airport Consultants Pte. Ltd. <sup>(a)</sup>	Provision of airport-related consultancy services	Singapore	<b>100</b>	100
Changi Airport Planners and Engineers Pte. Ltd. <sup>(a)</sup>	Provision of professional engineering services in the field of civil aviation	Singapore	<b>100</b>	100

# LISTING OF SIGNIFICANT COMPANIES IN THE GROUP

For The Financial Year Ended 31 March 2022

Name of companies	Principal activities	Country of business/ incorporation	Equity holding	
			31 March 2022 %	31 March 2021 %

## Significant subsidiaries (continued)

### Held by the Group: (continued)

Rio de Janeiro Aeroporto S.A. <sup>(b)</sup>	Investment holding	Brazil	<b>100</b>	100
Concessionária Aeroporto Rio de Janeiro S.A. <sup>(b)</sup>	Airport concessionaire	Brazil	— <sup>(d)</sup>	51
Jewel Changi Airport Devt Pte Ltd <sup>(a)</sup>	Provision of development, project, and real estate management services	Singapore	<b>51</b>	51
Jewel Changi Airport Hotel Pte Ltd <sup>(a)</sup>	Hotel and F&B operations	Singapore	<b>51</b>	51
Jewel Changi Airport Trust <sup>(a)</sup>	Operation and management of mixed-use development	Singapore	<b>51</b>	51
Jewel Changi Airport Trustee Pte Ltd <sup>(a)</sup>	Provision of trustee-management services	Singapore	<b>51</b>	51
CTS Southeast Asia Pte. Ltd. <sup>(a)</sup>	Investment holding	Singapore	<b>100</b>	100
Changi Travel International Pte. Ltd. <sup>(a)</sup>	Provision of management services and representing airlines as general sales agent	Singapore	<b>100</b>	100



# LISTING OF SIGNIFICANT COMPANIES IN THE GROUP

For The Financial Year Ended 31 March 2022

Name of companies	Principal activities	Country of business/ incorporation	Equity holding	
			31 March 2022 %	31 March 2021 %

## Significant associated companies and joint ventures

### Held by the Company:

Experia Events Pte Ltd <sup>(c)</sup>	Organising and management of conferences, exhibitions and other related activities	Singapore	<b>20</b>	20
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### Held by the Group:

Concessionária Aeroporto Rio de Janeiro S.A. <sup>(b)</sup>	Airport concessionaire	Brazil	<b>51 <sup>(d)</sup></b>	–
Bengal Aerotropolis Projects Ltd <sup>(c)</sup>	Development of airport and township projects	India	<b>30.2</b>	30.2
Transport AMD-2 Ltd <sup>(c)</sup>	Investment holding	Russia	– <sup>(e)</sup>	30
OJSC International Airport Sochi <sup>(c)</sup>	Provision of airport and airport-related services	Russia	– <sup>(e)</sup>	30
OJSC International Airport Krasnodar <sup>(c)</sup>	Provision of airport and airport-related services	Russia	– <sup>(e)</sup>	30
OJSC International Airport Anapa <sup>(c)</sup>	Provision of airport and airport-related services	Russia	– <sup>(e)</sup>	30
Terminal Vladivostok <sup>(c)</sup>	Provision of airport and airport-related services	Russia	– <sup>(e)</sup>	20

# LISTING OF SIGNIFICANT COMPANIES IN THE GROUP

For The Financial Year Ended 31 March 2022

Name of companies	Principal activities	Country of business/ incorporation	Equity holding	
			31 March 2022 %	31 March 2021 %

## Significant associated companies and joint ventures (continued)

### Held by the Group: (continued)

Vladivostok International Airport <sup>(c)</sup>	Provision of airport and airport-related services	Russia	– <sup>(e)</sup>	18.5
Fukuoka International Airport Co., Ltd <sup>(c)</sup>	Provision of airport and airport-related services	Japan	<b>21</b>	21
Sino-Singapore Chongqing Airport Commercial Management Co., Ltd. <sup>(b)</sup>	Provision of retail mall management services	People's Republic of China	<b>49</b>	49

<sup>(a)</sup> Audited by PricewaterhouseCoopers LLP, Singapore.

<sup>(b)</sup> Audited by overseas practice of PricewaterhouseCoopers LLP.

<sup>(c)</sup> Audited by other firms

<sup>(d)</sup> During the financial year, the Group derecognised CARJ as a subsidiary and recognised CARJ as an equity accounted investee.

<sup>(e)</sup> During the financial year, the Group derecognised TAMD-2 as a joint venture and recognised TAMD-2 as financial assets held at fair value through profit or loss.

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# CORPORATE INFORMATION



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