

# A DECADE OF DISTINCT10N

ANNUAL REPORT  
2018/19



**CHANGI**  
airport group

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# A DECADE OF DISTINCT<sup>1</sup>ON

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FY2018/19 continued to be a year of achievement as Singapore Changi Airport registered a record 66.3 million passenger movements. Crowned Skytrax's World's Best Airport for the seventh consecutive year and the 10<sup>th</sup> time in all, the accolade is a combined effort by the over 50,000-strong ONE Changi airport community. A record-breaking year, Changi Airport also scored a high of 4.997 out of 5 in the Airports Council International's Airport Service Quality (ASQ) surveys and was named Best Airport by size and region.

Connecting travellers all over the world, Changi registered a 5.2% growth in passenger traffic this year, with growth in all regions.

With more than 100 airlines connecting Singapore to 380 cities worldwide, Changi Airport is now the world's seventh busiest airport for international traffic, handling about 7,400 flights every week.

Service excellence remains the core of the Changi Experience, as Changi continues to redefine the airport experience with the completion of Terminal 1 extension works, and exciting travellers with new retail concepts and spaces.

Even as Changi celebrates its achievements across the year, it continuously pushes the boundaries of what it takes to be an airport.

With Jewel Changi Airport, Changi is changing the world's perception of what an airport can be through a medley of experiences integrating nature, retail and play. Opened in April 2019, the airport's newest gem now attracts millions of visitors every month.

Changi's transformation journey has only just started. As the development of Changi East picks up pace and with terminal upgrading works in plan, Changi will continue to pursue ways to redefine air travel and the ultimate passenger experience, as it has been doing for the past decade.





# DESTI NATIONS

As the region's premier gateway and the world's seventh busiest airport, Singapore Changi Airport registered a record number of 66.3 million passenger movements in FY2018/19. To meet rising expectations, we work closely with our airline partners to tap on opportunities in the region and beyond, reinforcing Changi's connectivity and strengthening our position as one of the leading air hubs in the world. We endeavour to bring the world closer and connect passengers to more exciting destinations.

**240**  
CITIES CONNECTED  
IN 2009



**380**  
CITIES CONNECTED  
IN 2019

# EXCEPTIONAL

Over the past decade, Changi Airport has become synonymous with exceptional service and world-class amenities. Our passenger-centric philosophy motivates us to continue redesigning the airport experience to meet the evolving needs of travellers. For the 180,000 passengers or more that pass through the airport every day, it is our goal to make every journey an unforgettable one. With Jewel Changi Airport, we have further transformed the Changi Experience – with innovative design, lush greenery and a myriad of options for shopping and dining.

**106,000**  
PASSENGERS  
ENTHRALLED  
DAILY IN 2009



**182,000**  
PASSENGERS  
ENTHRALLED  
DAILY IN 2019







# INSPI RAT10NS

Retail therapy takes on a whole new meaning at Changi Airport. With a stellar line-up of over 500 retail and service stores and 260 dining options across Changi's terminals and Jewel, there's something for everyone. We bring together the latest brands and most unique concepts to create memorable shopping and dining experiences. By constantly refreshing and innovating our commercial offerings, travellers and visitors are spoilt for choice at one of the world's best airports to shop and dine at.

**\$\$537m**  
CONCESSION  
REVENUE IN 2009



**\$\$1.17bn**  
CONCESSION  
REVENUE IN 2019

# VIS **10** NARY

Our spirit of innovation propels us on our quest to constantly reinvent air travel. Using cutting-edge technologies and creative solutions to optimise resources, improve operations and enhance the overall passenger experience, Changi Airport pushes the boundaries to build an airport for the future. Set to be one of the mega terminals of the world, the Changi East project lays the foundation for Changi Airport's future growth. On the back of increasing passenger traffic and strong aviation growth, the Changi East development will reinforce Changi's position as a leading airport in the global stage.

**66M**  
PASSENGER CAPACITY  
PER ANNUM IN **2009**



**85M**  
PASSENGER CAPACITY  
PER ANNUM IN **2019**





  
**FAST**  
CHECK-IN





# DEDI CATION

People are our greatest assets. As Changi expands, the over 50,000-strong airport community continues to be the driving force behind our success. Their dedication to deliver the best Changi Experience to all passengers and visitors puts Changi Airport on the world map for service excellence. By strengthening the work culture and providing the One Changi community opportunities to learn and grow together, we strive to become an organisation that we'll be proud to call home.

**28,000**  
DEDICATED AIRPORT  
COMMUNITY  
EMPLOYEES  
IN 2009



**50,000**  
DEDICATED AIRPORT  
COMMUNITY  
EMPLOYEES  
IN 2019

# PASS 10N

While we serve as the gateway to the rest of the world, we are also committed to opening new doors for disadvantaged youth in our society. Community programmes run by Changi Foundation allow us to connect with these youths and encourage them to achieve their fullest potential. Together with our partners, we are privileged to be able to provide unique opportunities for these youths to learn and grow in one of world's busiest airports.

**290**  
VOLUNTEER HOURS  
IN 2010



**2,500**  
VOLUNTEER HOURS  
IN 2018





# CAG's Mission, Vision and Values

## MISSION

### **TO BE THE WORLD'S LEADING AIRPORT COMPANY,**

growing a safe, secure and vibrant air hub in Singapore and enhancing the communities we serve worldwide.

## VISION

### **EXCEPTIONAL PEOPLE, CONNECTING LIVES**

We aspire to build a company where ordinary people achieve exceptional results. Working together as a team, we bring great ideas to life and achieve exceptional results beyond our individual capabilities. Customers are our inspiration. From the youngest child to the largest corporation, we understand that what we provide connects people in ways that will enhance their lives.

## VALUES



We value our  
**PEOPLE**



We are  
committed to our  
**CUSTOMERS**



**INTEGRITY**  
is at the heart of  
everything we do



We are  
the best in our  
**BUSINESS**



We succeed with our  
**PARTNERS**



## Corporate Profile

**Changi Airport Group (Singapore) Pte Ltd (CAG)** was formed on 16 June 2009 and the corporatisation of Changi Airport followed on 1 July 2009. As the airport company managing Changi Airport, CAG undertakes key functions focusing on airport operations and management, air hub development, commercial activities and airport emergency services.

Over the past three decades, CAG – previously as part of the Civil Aviation Authority of Singapore (CAAS) – has successfully established Changi Airport as the world's most awarded airport. With more than 600 accolades under its belt, Changi Airport has come a long way since its humble beginnings in 1981, when Terminal 1 (T1) first opened.

One of the world's busiest international airports today, Changi Airport is a major air hub in Asia. It handled more than 66 million passenger movements in FY2018/19, serving about 100 airlines flying to more than 380 cities worldwide. With more than 500 retail and service stores, as

well as about 260 F&B outlets across Jewel Changi Airport (Jewel) and its four terminals, Changi Airport is also one of Singapore's best places for shopping and dining. Increasingly, the airport has become a favourite haunt for Singapore residents, especially families.

To spread the success of Changi Airport far and wide, CAG invests in and manages foreign airports through its subsidiary Changi Airports International (CAI). CAI's objective is to build a quality portfolio of airport investments worldwide with strong markets and significant development potential. Its key business activities include investments in airports, as well

as the provision of consultancy and airport management services. Today, CAI's presence covers major economies including China, India, Japan, the Philippines, South America and Europe.

At Changi Airport, there is immense pride in providing impeccable service and unrivalled capabilities to deliver the iconic Changi Experience. More than just a model of functionality, the Changi Experience is about connecting passengers and engaging them, in ways that enhance their lives. Every journey through Changi Airport is an opportunity to bring people together and to help them realise their aspirations.

# Chairman & CEO Message

July 2019 marked the 10<sup>th</sup> anniversary of Changi Airport's corporatisation and the formation of CAG. Over the past 10 years, we have consistently built on Changi Airport's successes and we are pleased to report a set of commendable results for financial year 2018/19.

For the year ending 31 March 2019 (FY2018/19), a 5.2% growth in passenger traffic resulted in Changi Airport managing a record 66.3 million passenger movements. This was almost 80% more than the 36.9 million passengers that passed through Changi at corporatisation 10 years ago. Cargo throughput for the year was steady at 2.14 million tonnes. On the commercial front, concession sales grew 8.1% to reach a record high of S\$2.8 billion.

Throughout the year, we were hard at work preparing to welcome the world to Jewel. This iconic development underlines CAG's continued commitment to innovation and customer experience that will help us to stay competitive and remain attractive as a global air hub. We are thankful to our passengers for the recognition that Changi Airport continues to receive, including our seventh consecutive World's Best Airport award from Skytrax in March 2019.

## CHANGI'S JEWEL

It was a busy year for the CAG team as we not only completed the expansion of T1, our oldest terminal, but also worked towards the opening of Jewel to local residents and tourists alike. This game-changing lifestyle destination not only adds to Singapore's tourism offerings, it presents enormous potential for Changi to work with partners to create new experiences and continue to raise the appeal of Changi Airport as a preferred transit hub.

We have embedded airport facilities within Jewel that will enhance the Changi Experience for travellers. Besides early check-in, FAST and baggage storage facilities, there is also the new Changi Lounge which is designed to support CAG's intermodal transfer strategy to serve the growing demand for fly-cruise travel.

Jewel comes complete with a slew of unique play attractions to thrill both the young and young-at-heart. Canopy Park, located on the top level, houses attractions such as the Sky Nets, Hedge Maze, Mirror Maze, Discovery Slides and Canopy Bridge. Another attraction in Jewel is the Changi Experience Studio. It is Changi's very own interactive gallery that brings visitors on an exciting virtual adventure through the past, present and future of Changi Airport, through engaging activities. Jewel has radically defined passengers' experience in an airport.

## STRENGTHENING THE NETWORK

The last year saw more stable oil prices which contributed to the overall profitability of the global aviation industry. CAG continued to work closely with our airline partners on expanding Changi's network, and we were happy to welcome four new airlines (including three from China) and new links to nine cities.

Connectivity to China continued to improve during the year, with three more city links bringing the total to 37. China traffic went up by 7.9%, while traffic to and from India, another major market, grew 10.5%. Together, these two markets accounted for 17.8% of Changi's total passenger traffic growth during the year.

There were also significant developments on European routes as we welcomed LOT Polish. This



Left to right:  
**LIEW Mun Leong**  
Chairman

**LEE Seow Hiang**  
Chief Executive Officer





has not only provided Changi with a non-stop service to Warsaw, but also allowed passengers to enjoy connectivity options through LOT's extensive intra-Europe network. With Scoot's introduction of four weekly services to Berlin, Changi is now connected to 19 cities in Europe.

FY2018/19 also saw significant developments in ultra long-haul flights from Changi Airport. In October 2018, Singapore Airlines launched the world's longest commercial flight from Singapore to Newark, in addition to non-stop services to Los Angeles and San Francisco. Including United Airlines' twice-daily non-stop services to San Francisco, there are now 41 weekly non-stop services to the United States.

Whilst we are optimistic of growth in aviation, especially in Asia, we are reminded by recent events that the industry's prospects can be affected by events beyond our control. The grounding of the Boeing 737 Max aircraft has affected some of our airline partners and would moderate seat capacity growth in the near future. Growth in the industry could also be hampered if fuel costs rise or the trade situation between the USA and China worsens. History has shown that the imposition of higher tariffs can significantly affect cargo movements.

#### **WORLD-CLASS TRAVEL RETAIL**

Our commitment to re-inventing the travel retail space through innovative collaborations and initiatives has helped Changi Airport to mitigate the effects of stiff competition from e-commerce platforms, with spend per passenger rising slightly during the year.

Recognising that shopping online is increasingly an attractive proposition for many, iShopChangi, Changi's e-commerce portal, has increased the number of products carried to more than 20,000, as well as redesigned its website to make it even more user-friendly for customers. This has resulted in its customer base growing to over 100,000 shoppers.

Changi's loyalty programme, Changi Rewards, underwent a facelift and introduced several new initiatives and member benefits such as free parking and airport lounge access for Platinum and Gold members. As part of the enhancement, the more than one million Changi Rewards members can now access and redeem their loyalty points via the iChangi mobile app.

To stretch Changi Airport's marketing footprint beyond Singapore, CAG has embarked on strategic partnerships with top international brands to have their global product launches in Changi Airport. Such joint activities and promotions have been successful in raising awareness and driving sales.

### **ELEVATING THE AIRPORT EXPERIENCE**

Recognising that the digital experience is critical to today's customers, we have made efforts to enhance this experience across the key passenger touchpoints in Changi's digital ecosystem. Both the Changi Airport website and iChangi mobile application were redesigned, and a new website for Jewel was launched. These developments were made to provide a friction-free customer experience as well as improve operational efficiency. Changi Airport has always had a special relationship with local residents, providing them with many reasons to visit even when they are not catching a flight. To provide them with more reasons to spend time at Changi, Terminal 3 Basement 2 (T3 B2) underwent a series of upgrades, introducing a new event space and indoor garden. Created as the focal point of T3 B2, this community space features a spacious stepped seating area that can host a multitude of events and activities.

In the airside of Terminal 4 (T4), we unveiled Chandelier, Changi's new and largest play area. This one-of-a-kind immersive three-storey-high

rope structure is set to enthrall both adults and children alike.

Among the airport community, CAG embarked on a service blueprinting journey to improve the immigration experience at Changi Airport in partnership with the Immigration and Checkpoints Authority and Certis Aviation Security. Another new initiative was the ONE Changi Service Challenge where airport partners were invited to contribute ideas to enhance the Changi Experience in three areas: People (Care), Place (Home) and Work (Pride). These not only helped to improve our passengers' experience, but also helped to deepen the sense of belonging among airport workers.

To inculcate an ethos of sustainability among the airport community, CAG has formed a Sustainability Working Group that will work towards achieving United Nations Sustainable Development Goals that it has identified and prioritised. Additionally, Changi Airport has made a commitment to reduce carbon emissions intensity by 20% by FY2029/30.

### **UPGRADING INFRASTRUCTURE**

Alongside the construction of Jewel, was the expansion works that were carried out concurrently at T1. The new meeters and greeters hall is fully integrated with Jewel and 35% bigger than before. It also features the Arrival Garden, a unique landscape experience, a first for the landside of Changi's terminals.

In addition to a new coach bay at T1 that has seen a 20% increase in capacity, there is now a new T1/Jewel Car Park over five basement levels. This is now the largest car park at Changi Airport, bringing the total number of car park spaces at the airport to more than 8,000.

In November 2018, Seletar Airport's new passenger terminal opened for operations. Spanning 10,000 square metres, the two-

storey terminal has a capacity of 700,000 passenger movements a year and is designed for both scheduled and non-scheduled flight services. The terminal includes the Seletar Business Aviation Centre, which has an exclusive check-in and lounge area where business aviation passengers can enjoy expeditious departure and arrival clearance.

### **BUILDING FOR THE FUTURE**

The Changi East development project is making good progress, reaching major milestones during the year. The Master Building Consultants and Master Civil Consultants for Terminal 5 (T5) were appointed, while T5's concept design has been completed and has moved on to its schematic design phase.

As part of the Changi East development, Runway 3 has been strengthened and lengthened, from 2.75 kilometres to 4.0 kilometres, to handle larger passenger aircraft in future. Supporting infrastructure such as drainage systems and ancillary buildings, like Fire Station 3 and Airfield Lighting Control Centres, have also been completed.

### **CHANGI AIRPORTS INTERNATIONAL**

Beyond our shores, CAI expanded its overseas portfolio. Together with its partners, CAI started new contracts to manage airports in Fukuoka and Chongqing and won a 25-year concession to operate and maintain Clark International Airport in Manila. These added to its airport portfolio which also includes airports in Brazil, India and Russia.

In Brazil, Tom Jobim International Airport (in which CAI has a majority stake) faced a challenging external environment and saw domestic passenger traffic decline 16% year-on-year. Overall, it managed 15 million passenger movements in 2018, while cargo revenue grew 59% year-on-year. CAI is working closely with the airport's

management team to develop and implement new programmes to improve the airport's performance.

In Russia, Sochi International Airport was named Best Regional Airport by Business Traveller Russia and at the CIS Awards 2018. Vladivostok International Airport was named Best Economic Project for Regional Development and won second place for Best International Airport (up to 4 mppa) for the second consecutive year at Russia's National Aviation Infrastructure Show 2019.

Mr Lim Liang Song, CAI's CEO since April 2011, stepped down from his position on 1 July 2019. We thank him for his leadership and contributions which have resulted in significant growth of CAI's airport investment, asset management and consultancy portfolios. Liang Song is succeeded by Mr Eugene Gan, who steps up from his previous role of Managing Director, Asset Management in CAI.

### **SUSTAINING FINANCIAL GROWTH**

For FY2018/19, the Group recorded consolidated operating revenue of S\$3.0 billion, representing a growth of 16.8%. This was primarily due to strong passenger growth as well as the full year consolidation of operating results for Tom Jobim International Airport in Rio de Janeiro, Brazil - CAI increased its stake in the Brazilian airport, from 20.4% to 51.0%, in December 2017. Changi Airport's operating revenue increased by 8.1% to S\$2.6 billion, underpinned by strong passenger growth and higher airport concession revenue. Airport concession and rental income continued to grow strongly, increasing 5.9% to reach S\$1.3 billion.

On the cost front, total expenses grew 28.6% to S\$2.1 billion, largely due to the full year impact of the consolidation of the Brazilian airport investment, higher

operating costs with the opening of new facilities such as T4 and the Seletar passenger terminal and the imposition of a new regulatory contribution by CAAS.

To help airlines cope with the increase in aeronautical charges, a one-time rebate package for airlines was rolled out during the year. In addition, CAG continues to support its airline partners through multiple incentive and collaborative programmes under the Changi Airport Growth Initiative to incentivise airlines to pursue growth, drive traffic and enhance connectivity to Changi Airport.

Overall, the Group achieved earnings before interest, taxes, depreciation and amortisation (EBITDA) of S\$1.5 billion in FY2018/19, representing an improvement of 11.9% from the previous year. Net profit attributable to the shareholder was lower by 20.3% at S\$677 million primarily due to the consolidation of full year losses from Tom Jobim International Airport.

### **AN EMPLOYER OF CHOICE**

As we grow and expand the business of CAG, we will need to be able to attract and retain the best talents. It is equally important that we continue to grow and equip our staff with the skills to excel in the fast-changing environment we work in. Recognising the need to promote innovation as part of our organisational culture, we have transformed office spaces in Changi Airport to provide a work environment which facilitates collaboration and the exchange of ideas, whether between colleagues or with external parties.

Our efforts have not gone unnoticed with recognition such as the Randstad Most Attractive Employer 2018, and Excellence in Workplace Culture 2018 awards. This has been made possible only because of the commitment, diligence and teamwork of the

management and staff of CAG.

As we look back over the past 10 years, it has been a decade of transformation, not just for CAG but for Changi Airport as well. We must now look forward and continue to pursue the dreams that will help us to grow and reach new heights.

We would like to take the opportunity to thank our Board Directors for their strong stewardship and valuable insights throughout the course of the year. Our heartfelt appreciation goes to Mr Miguel Ko, who stepped down from the Board in August 2018, for his contributions. We also welcome new Directors, BG Kelvin Fan and Mr Chia Song Hwee, who joined in August and October 2018 respectively.

We are confident that, together, the Board will continue to guide CAG in charting the next chapters of its exciting journey ahead.



**LIEW Mun Leong**  
Chairman



**LEE Seow Hiang**  
Chief Executive Officer

# Board of Directors

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- 1. **Liew** Mun Leong
- 2. **Lee** Seow Hiang
- 3. **Tan** Ching Yee
- 4. Michael George William **Barclay**

- 5. Eric **Ang** Teik Lim
- 6. Danny **Teoh** Leong Kay
- 7. Richard R. **Magnus**
- 8. Professor **Tan** Kong Yam

- 9. **Tan** Gee Paw
- 10. **Lim** Zhi Jian
- 11. **Ng** Chee Khern
- 12. Kelvin **Fan**
- 13. **Chia** Song Hwee

## Liew Mun Leong

Chairman

Mr Liew is the Chairman of CAG. He was appointed to the Board on 16 June 2009.

Mr Liew was the founding Group President and CEO of CapitaLand Limited. He is currently the Chairman of Surbana Jurong Private Limited. Mr Liew sits on the boards of Singapore Exchange, Singapore-China Foundation Ltd and the Chinese Development Assistance Council. He also chairs the Board of Temasek Foundation Nurtures CLG Ltd, the Management Advisory Board of NUS Business School and the NUS School of Continuing and Lifelong Education (SCALE) Industry Advisory Board. He is a Senior International Advisor of Temasek.

Mr Liew is the Provost's Chair Professor (Practice) (on pro bono) at NUS Business School, NUS Faculty of Engineering and the Lee Kuan Yew School of Public Policy. He is also the Rector of NUS Ridge View Residential College.

He was elected the President of International Organisation for Standardisation (ISO) for the term 1997 to 1998.

With over 47 years of experience in the construction and real estate industries both locally and overseas, Mr Liew has been involved in several Singapore's public sector projects, including the development of Changi Airport from the beginning in 1975. For his exceptional contributions, Mr Liew was awarded the Meritorious Service Medal by the President of Singapore in 2011. In 2016, Mr Liew was conferred France's National Order of the Legion of Honour (Ordre national de la Légion d'honneur), with the rank of Knight.

Mr Liew graduated from the University of Singapore with a degree in Civil Engineering and is a registered professional civil engineer. He has published five books, titled *Building People: Sunday Emails from a CEO, Volumes 1–3, Building People Volume 4: Sunday Emails From a Chairman and Sunday Em@ils from a Chairman, Volume 5*.

## Lee Seow Hiang

Chief Executive Officer

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

Mr Lee is concurrently, amongst others, Deputy Chairman of Changi Airports International Pte Ltd, Director of Jewel Changi Airport Holding Pte Ltd and Chairman of Changi Foundation Board. He holds the appointment of President of Airports Council International (ACI) Asia-Pacific Regional Board and a Member on the ACI World Governing Board. He also sits on the Board of NTUC FairPrice Co-operative Ltd and SMRT Corporation Ltd.

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 Minister Mentor Lee Kuan Yew in the Prime Minister's Office. Mr Lee was awarded the SAF (Overseas)/President's Scholarship in 1989 and 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.

## 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 National Research Foundation and the Lee Kuan Yew School of Public Policy.

She 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 Masters of Science in Management from the Graduate School of Business, Stanford University.

## Michael George William Barclay

Mr Barclay is a Non-Executive Director of CAG. He was appointed to the Board on 16 June 2009.

Mr Barclay is the Group CEO of Mandai Park Holdings (MPH). He oversees both Mandai Park Development, the entity set up to

drive the rejuvenation of Mandai into an integrated wildlife and nature precinct, and Wildlife Reserves Singapore, the operator of four award-winning attractions – Jurong Bird Park, Night Safari, River Safari and Singapore Zoo.

Prior to joining MPH, Mr Barclay was CEO of Sentosa Development Corporation for seven years. This followed on from stints as Regional Vice President Asia for the International Air Transport Association and Chief Executive of SilkAir. Mr Barclay began his career with Singapore Airlines, holding various portfolios in Singapore, Germany, Switzerland, Belgium and the UK.

Mr Barclay has a Master of Science degree in Transport Planning & Engineering from the University of Leeds and he completed the Advanced Management Program at Harvard Business School.

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### **Eric Ang Teik Lim**

Mr Ang is a Non-Executive Director of CAG. He was appointed to the Board on 18 November 2009.

Mr Ang is a DBS banker with 41 years of banking experience and until 31 May 2014, was responsible for the capital markets business. He is now a Senior Executive Advisor at DBS Bank and is principally responsible for business origination and high-level relationship building for the bank.

His current directorships include Sembcorp Marine Ltd, Raffles Medical Group, Surbana Jurong Pte Ltd, DBS Foundation Ltd and NetLink NBN Management Pte Ltd. He is also the Co-Chairman of the SGX Disciplinary Committee. He was previously a director of Hwang Capital (Malaysia) Bhd.

Mr Ang graduated from the University of Singapore with a Bachelor of Business Administration (Honours) degree.

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### **Danny Teoh Leong Kay**

Mr Teoh is a Non-Executive Director of CAG. He was appointed to the Board on 23 July 2010.

Mr Teoh is currently Chairman of M1 Ltd and a Board Member of, amongst others, the following companies: DBS Ltd, DBS Group Holdings Ltd, DBS Foundation Ltd and Keppel Corporation Ltd.

Mr Teoh was Managing Partner of KPMG in Singapore until his retirement on 30 September 2010. During this time, he served as a member of KPMG's Asia-Pacific Board and the KPMG International Council and Board. He also held various other positions at KPMG, including Head of Audit & Risk Advisory Services (Singapore), Head of Risk Advisory Services (Asia-Pacific) and Head of Financial Services (Singapore).

Mr Teoh qualified as a Chartered Accountant in the UK in 1981 and is a member of the Institute of Chartered Accountants of England and Wales. He also serves as the Chairman of the CAG Audit Committee and is a member of the CAG Board Risk Committee.

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### **Richard R. Magnus**

Mr Magnus is a Non-Executive Director of CAG. He was appointed to the Board on 23 July 2010.

Mr Magnus has several public and private sector responsibilities. Amongst others, Mr Magnus is currently Chairman of the Public Transport Council, Political Films Advisory Committee, Bioethics

Advisory Committee, and is a Member of the Public Service Commission and the Ministry of Home Affairs Resource Panel. In the private sector, Mr Magnus serves on the board of Singapore Consortium Investment Management Limited and is Chairman of Temasek Foundation Cares CLG Ltd and Human Capital (Singapore) Pte Ltd. He was the Founding Chairman of the Casino Regulatory Authority. He is also Singapore's First Representative to the ASEAN Inter-Governmental Commission on Human Rights, Vice-Chairman of UNESCO's International Bioethics Committee. He is also a Justice of the Peace.

Mr Magnus is a retired (now termed Chief) District Judge. He was awarded the Meritorious Service Medal in 2009 for his exceptional public service, an Outstanding Volunteer award in 2014 by the Ministry of Social and Family Development, and the Public Service Star by the State in 2015.

Mr Magnus graduated from National University of Singapore with a Masters of Laws. He is also an alumnus of the Harvard Business School and the John F Kennedy School of Government.

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### **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 and Co-Director of the Asia Competitiveness Institute at the Lee Kuan Yew School of Public Policy at the National University of Singapore. He is also Deputy Chairman of APS Asset Management (China) and sits on the boards of Surbana-Jurong

and CapitaRetail 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 11<sup>th</sup> 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.

### **Tan Gee Paw**

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

Mr Tan previously served as Chairman of the Public Utilities Board (PUB), Singapore's national water agency from 1 April 2001 until his retirement on 31 March 2017. Mr Tan is a member of a number of government committees. He is the Adjunct Professor at the Lee Kuan Yew School of Public Policy, National

University of Singapore (NUS). Previous appointments held by Mr Tan were Principal of Ngee Ann Polytechnic, and Permanent Secretary of the then Ministry of the Environment. He is currently a member of CAG's Executive Committee on Airport Development and a Director of Surbana Jurong Private Limited.

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.

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 NUS; and the NUS Society Distinguished and Outstanding Member Award by the NUS in 2014. 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 is the Special Advisor to Chairman, PUB, as well as the Special Advisor to Land Transport Authority (LTA), and a member of the Centre for Liveable Cities (CLC) Panel of Distinguished Advisors.

### **Lim Zhi Jian**

Mr Lim is the Alternate Director to Mrs Tan Ching Yee. He was appointed to the Board on 1 May 2017.

He is Director (Reserves and Investment) at the Ministry of Finance. Prior to joining the Ministry of Finance in June 2016, he held various appointments in the Ministry of Manpower and the Monetary Authority of Singapore. At the Ministry of Manpower, he was the Deputy Director of the Foreign Workforce Policy Department. At the Monetary Authority of Singapore, he held the positions of the Deputy Director of the Strategic Planning Office and Senior Policy Analyst of the Prudential Policy Department.

Mr Lim was awarded the Overseas Scholarship by the Monetary Authority of Singapore and graduated from Carnegie Mellon University with a double major in Computer Engineering and Economics. He also holds a Masters in International Policy from Stanford University and a Master in Public Administration Edward S. Mason Program (Mason Program) from the Harvard Kennedy School.

### **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 Smart Nation and Digital Government in the Prime Minister's Office. He leads the Smart Nation and Digital Government Group, which was formed in May 2017. He is also the Chairman of the Government Technology Agency of Singapore (GovTech) board, a Director of the boards of CapitaLand Mall Trust Management and a board member of the National Research Foundation (NRF).

Mr Ng previously held the following positions: Permanent Secretary (Defence Development) in Singapore's Ministry of Defence, 2<sup>nd</sup> Permanent Secretary in Singapore's Ministry of Health from August 2014 to February 2016, Director of the Security and Intelligence Division from 2010 to 2014, and Chief of the Republic of Singapore Air Force from 2006 to 2009. Mr Ng was also a board member of the Civil Aviation Authority of Singapore.

Mr Ng was a recipient of the President's Scholarship and Singapore Armed Forces Overseas Scholarship. He holds a Bachelor of Arts (Second Upper Class Honours) and a Master of Arts in Philosophy, Politics and Economics from the University of Oxford. He also graduated with a Master of Public Administration from Harvard University.

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**Kelvin Fan**

Brigadier General (BG) Kelvin Fan is a Non-Executive Director of CAG and was appointed to the Board on 15 August 2018.

BG Fan assumed the appointment of Commander, Air Defence and Operations Command on 23 May 2019.

BG Fan joined the Singapore Armed Forces (SAF) in 1998. He started his career in the Republic of Singapore Air Force (RSAF) as an Air Warfare Officer, serving various command roles in Ground Based Air Defence units. Prior to his current appointment, BG Fan served as Head Air Operations in the RSAF, Director (Policy) in the Ministry of Defence where he was responsible for Singapore's deterrence and defence diplomacy efforts, as well as Head Air Plans, the principal staff assigned by the Chief of Air Force to oversee capability development and force transformation for the RSAF.

BG Fan is also a member of the Singapore Administrative Service. Between 2007 and 2009, he served as Senior Assistant Director in the Ministry of Trade and Industry, where he was responsible for developing tourism policies.

In 1998, BG Fan was awarded the SAF Overseas Scholarship. He graduated with 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 the Sloan School of Management, Massachusetts Institute of Technology in 2014. In 2015, BG Fan was awarded the Public Service Administration (Military) (Silver).

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**Chia Song Hwee**

Mr Chia Song Hwee is a Non-Executive Director of CAG and was

appointed to the Board on 1 October 2018.

Mr Chia is the President & Chief Operating Officer of Temasek International Pte Ltd (Temasek).

Mr Chia is also a member of Singapore's Advisory Council on the Ethical Use of AI and Data, as established by the Infocomm Media Development Authority.

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 & CEO of Chartered from June 2002 to December 2009. Mr Chia also held a number of management positions since he joined Chartered in 1996, including Senior Vice President, Chief Financial Officer, and Chief Administrative Officer.

Prior to his tenure at Chartered, Mr Chia was from the Schlumberger group, a global oilfield services group, where he was Regional Controller for Asia, Australia and Middle East for the drilling group.

Mr Chia graduated with a Bachelor of Business (Accountancy) 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 (ACE) Award for Executive of the Year in 2007.

# Executive Management Team

**LEE Seow Hiang**  
Chief Executive Officer



**TAN Lye Teck**  
Executive Vice President,  
Airport Management



**YAM Kum Weng**

- ◆ Executive Vice President,  
Airport Development
- ◆ Advisor, Air Hub  
Development



**LIM Peck Hoon**  
Executive Vice President,  
Commercial



**NG Lai Leng**

- ◆ Chief Financial Officer
- ◆ Executive Vice  
President, Corporate
- ◆ Executive Vice  
President, Enterprise  
Performance &  
Development



**LIM Liang Song\***  
Chief Executive Officer,  
Changi Airports  
International



**Eugene Gan\***  
Managing Director,  
Asset Management,  
Changi Airports  
International



\* Mr Lim Liang Song stepped down as Chief Executive Officer, Changi Airports International on 30 June 2019.  
Mr Eugene Gan was appointed Chief Executive Officer, Changi Airports International on 1 July 2019.

# Management Team

## CHANGI AIRPORT GROUP

### ANG Siew Min

Senior Vice President,  
Development Operations

### CHOY Da Wen

Group Senior Vice President,  
Transformation & Enterprise  
Development

### CHUNG Choon San

Project Director,  
Changi East Construction

### GOH Hwai Kar

Senior Vice President,  
People Services & Rewards

### Jayson GOH

Managing Director,  
Airport Operations Management

### HUNG Jean

Chief Executive Officer,  
Jewel Changi Airport Development

### KOH Miaw Ling

Senior Vice President,  
Terminal 5 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

### Steve LEE

Chief Information Officer /  
Group Senior Vice President,  
Technology

### LEONG How Yin

Project Director,  
Changi East Planning,  
Design & Construction

### LEONG Kok Hoong

Senior Vice President,  
Development Contracts &  
Cost Control

### Albert LIM

Senior Vice President,  
Passenger Experience

### LIM Ching Kiat

Managing Director,  
Air Hub Development

### LIM Wee Ping

Senior Vice President,  
Business Development

### LING Ming Koon

Senior Vice President,  
Airport Operations Planning & Strategy

### Jeffrey LOKE

Senior Vice President,  
Pricing & Commercial Strategy

### Jessie LOONG

Senior Vice President,  
Legal & Compliance /  
Company Secretary

### Matthew NGAN

Senior Vice President,  
Mechanical & Electrical

### ONG Chee Chiau

Group Senior Vice President,  
Changi East Terminal 5 Planning

### ONG Sim Lian

Group Senior Vice President,  
Design Management

### Leslie PAKIANATHAN

Project Director,  
Tunnel Construction Management

### 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

Group Senior Vice President,  
Airside Concessions

### WEN Dazhi

Senior Vice President,  
Tunnel Design Management

### Ivy WONG

Senior Vice President,  
Strategy & Transformation

### YEO Kia Thye

Managing Director,  
Airport Operations Planning & Airside

## CHANGI AIRPORTS INTERNATIONAL

### CHAN Mew Yoong

Director & Head,  
Human Resources

### Mabel KWAN Wei Yee

Managing Director,  
Changi Airport Consultants &  
Investments

### Peter LEE Chung Shek

Managing Director,  
Changi Airport Planners &  
Engineers

### LOW Beng Lan

Chief Financial Officer

### OON Wei Ying

Director,  
Risk Management

### SEE Ngee Muoy

Managing Director,  
Legal & Compliance

# Awards

ACCOLADES RECEIVED BY CHANGI AIRPORT (FY2018/19)



Month	Category of Awards	No of Times	Publication/Organisation
Mar	World's Best Airport	10	Skytrax
	Best Airport by Size (over 40 million passengers) 2018	5	Airports Council International
	Best Airport by Region (Asia-Pacific) 2018	3	Airports Council International
Feb	Best Airport in the World	14	DestinAsian
	Deficiency - Free 2018	38	International Federation of Air Line Pilots' Association (IFALPA)
Jan	Top Worldwide Airport	17	Wanderlust

Month	Category of Awards	No of Times	Publication/Organisation
Dec	Best Overall Airport	4	Global Traveler
	World's Leading Airport	13	World Travel Awards
Nov	Favourite Airport	8	Conde Nast Traveller India
	Best Airport in the World	12	Ultratravel
	Best Airport in the World	14	Business Traveller China
	Best International Airport	7	Travel + Leisure India and South Asia
	Best Overseas Airport	14	Selling Travel
Oct	Airport of The Year	1	Air Convention
	Best Airport - Asia Pacific	2	Travel Weekly Asia
	Best Airport in the World	31	Business Traveller UK
	Top Airport in the World	10	Conde Nast Traveler US
	Best Airport in the World	25	Business Traveler US
Sep	Travel Hall of Fame - Best Airport of The Year	16	TTG Asia
	Best International Airport of the Year	9	Travel Weekly China
Aug	Best Airport in the World	26	Business Traveller Asia Pacific
	Best Airport in Asia Pacific	9	Business Traveller Asia Pacific
	Best International Airport	1	Travel + Leisure Southeast Asia
Jul	Asia's Leading Airport	15	World Travel Awards
	Top International Airport	6	Travel + Leisure US
	Favourite Airport	1	KAYAK
	Best Airport Worldwide	25	Business Traveller Germany
	No.1 Airport Worldwide	10	Smart Travel Asia
Jun	Best Family-Friendly International Airport	1	Whereverfamily.com
	Preferred Airport	1	International Traveller
May	Airport Authority with the Most Supportive Approach to Travel Retail	18	Duty Free News International & Travel Retailer International
Apr	Best Airport in the World	15	Business Traveller Middle East
	World's Best Airport	1	eDreams

2019

2018

# Financial Review

## Financial Highlights

	FY14/15	FY15/16	FY16/17	FY17/18	<b>FY18/19</b>
<b>Profit &amp; Loss (S\$'mil)</b>					
Total revenue	2,150	2,164	2,305	2,602	<b>3,040</b>
Total expenses	1,255	1,284	1,401	1,649	<b>2,120</b>
EBITDA	1,171	1,167	1,208	1,310	<b>1,466</b>
Profit after tax	782	784	657	835	<b>574</b>
Profit attributable to equity holder of the Company	784	786	662	849	<b>677</b>
<b>Financial Position (S\$'mil)</b>					
Assets	7,564	8,460	9,260	14,894	<b>15,108</b>
Liabilities	1,441	1,874	2,223	6,457	<b>6,647</b>
Equity	6,123	6,586	7,037	8,437	<b>8,461</b>
Equity attributable to equity holder of the Company	6,127	6,594	7,044	7,600	<b>7,839</b>
<b>Financial Ratios</b>					
EBITDA margin	54.5%	53.9%	52.4%	50.3%	<b>48.2%</b>
NPAT margin	36.4%	36.2%	28.5%	32.1%	<b>18.9%</b>
Return on equity	13.2%	12.3%	9.6%	11.6%	<b>8.8%</b>



## THE YEAR IN REVIEW

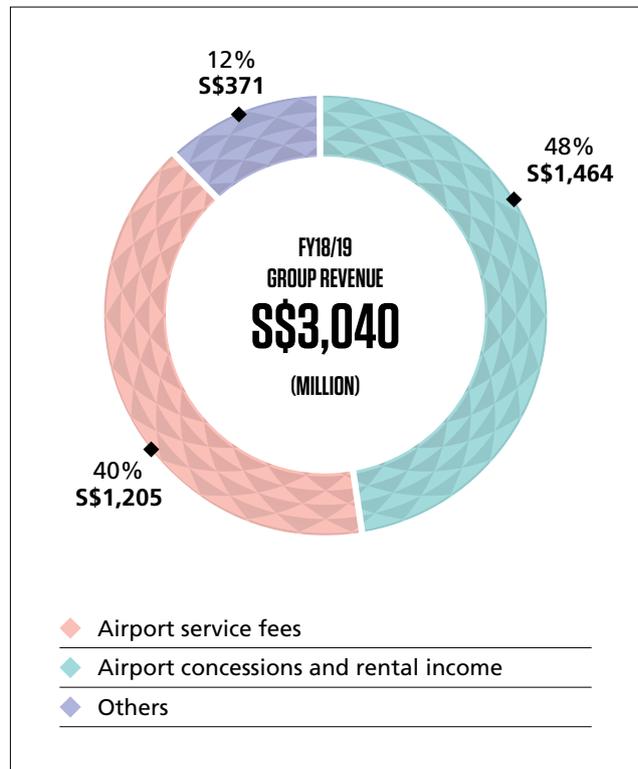
Changi Airport continued to register strong growth in passenger movements of 5.2% in FY2018/19 to reach 66.3 million passenger movements, placing Changi as the seventh busiest airport in the world for international passenger traffic. Indonesia continued to rank as Changi Airport's largest country market, followed by China, Malaysia, Australia and Thailand. Together, these five countries accounted for more than half of Changi Airport's total passenger traffic.

In FY2018/19, the Group recorded consolidated operating revenue of S\$3.0 billion, representing a growth of 16.8%. The rise in operating revenue was underpinned by growth in Changi Airport's operating revenue coupled with the full year impact of the consolidation of the operating results for Tom Jobim International Airport in Brazil. In December 2017, CAI, a wholly-owned subsidiary of CAG, increased its effective stake in Tom Jobim Airport from 20.4% to 51.0%. The operating results of Tom Jobim Airport was consolidated from the fourth quarter of the last financial year.

On the cost front, total expenses increased by 28.6% to S\$2.1 billion, largely due to the full year consolidation of Tom Jobim Airport, higher operating costs with the opening of new facilities such as T4 and Seletar passenger terminal, and the imposition of a new regulatory contribution by CAAS.

Overall, the Group achieved earnings before interest, taxes, depreciation and amortisation (EBITDA) of S\$1.5 billion in FY2018/19, representing an improvement of 11.9% (or S\$156 million) from the previous year. Net profit attributable to the shareholder (Net Profit) was lower by 20.3% (or S\$172 million) at S\$677 million primarily due to increased losses from Tom Jobim Airport, absence of a valuation gain which arose last year from the step-up acquisition of Tom Jobim Airport of S\$98 million, and the new regulatory contribution this year amounting to S\$85 million, in addition to higher depreciation expenses with the opening of new terminal facilities.

## GROUP OPERATING REVENUE



The Group's operating revenue grew 16.8% to S\$3.0 billion, of which 87.0% comprised revenue from Changi Airport and 11.6% from Tom Jobim Airport.

### Changi Airport operating revenue

Operating revenue from Changi Airport increased by 8.1% compared to last year, underpinned by strong passenger growth and higher airport concession revenue. Revenue from airport services (which comprised landing, parking and aerobridge charges as well as passenger service and security fees) increased by 10.4% to S\$1.1 billion due to strong passenger traffic and higher airport charges for both passengers and airlines. T4's successful opening last year has brought about a much-needed capacity boost, serving approximately nine million passengers during the year.

CAG continued to support its airline partners through multiple incentive and collaborative programmes under the Changi Airport Growth Initiative (CAGi) to incentivise airlines to pursue growth, drive traffic

and enhance connectivity to Changi Airport. Rebates were also given to airlines to help offset increases in aeronautical charges.

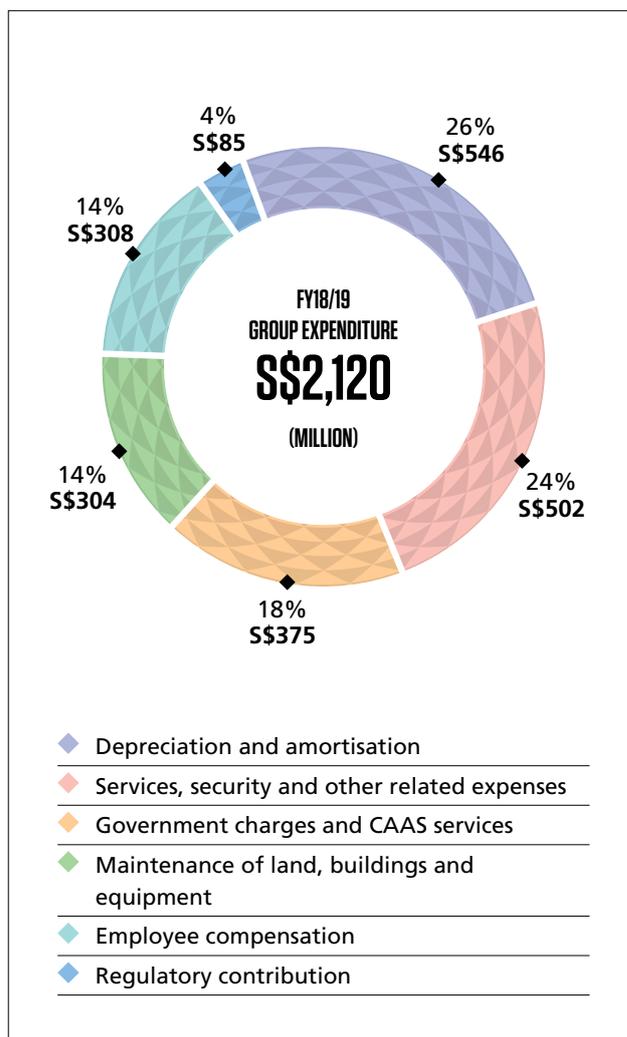
Airport concession and rental income continued to grow strongly, increasing by 5.9% to reach S\$1.3 billion. Concession sales by our tenants grew by 8.1% year-on-year to a record of more than S\$2.8 billion. Through intensive marketing and promotions, as well as continual refreshment and revamp of our retail spaces, CAG successfully helped its tenants grow sales.

The iShopChangi website was revamped with improved features, a more contemporary design and more lifestyle content. Its product variety also expanded by 50% to more than 20,000 product variations. Through iShopChangi, tenants can reach passengers beyond the terminals, offering time-pressed passengers the convenience and comfort of shopping before they step into Changi. Loyal shoppers can also accumulate Changi Rewards points for instant dollar redemptions on their next purchases. During the year, the Changi Rewards membership base surpassed 1 million members. CAG's anchor retail campaigns, Be a Changi Millionaire and the annual year-end promotions were also well received and helped to drive concession sales. The strong performance from the non-aeronautical segment enables CAG to subsidise and keep aeronautical charges at Changi Airport competitive.

### GROUP OPERATING EXPENSES

The Group's operating expenses (excluding depreciation and amortisation) increased by 21.9% to S\$1.6 billion in FY2018/19. The increase was largely due to additional operating expenses from the full year consolidation of Tom Jobim Airport, introduction of the new regulatory contribution by CAAS and the full year impact of T4 operating expenses.

Depreciation and amortisation expenses, which formed the largest component of the Group's operating expenses, increased by 52.8% to S\$546 million due to the opening of new infrastructure facilities in Changi Airport and the full-year consolidation of Tom Jobim Airport.



### Changi Airport operating expenses

Changi's operating expenses (excluding depreciation and amortisation) increased by 16.0% in FY2018/19. The increase was largely attributed to the new regulatory contribution, higher operating costs from the full year impact of T4, and the operationalisation of other new facilities such as the new Seletar Airport passenger terminal and the expanded T1.

As CAG continued to invest in capacity building, additional manpower and expenses were incurred to support multiple development projects. To moderate cost increases, CAG continued to drive innovation, leveraging technology to improve security, safety and efficiency of airport operations.

## FINANCIAL POSITION

Shareholder's equity increased by 3.1% to reach S\$7.8 billion, with a strong asset base of S\$15.1 billion. The growth in the Group's total equity was attributed to profits generated by the Group of S\$677 million during the year, offset by the payment of dividends and a reduction in the carrying value of Tom Jobim Airport due to devaluation of the Brazilian Reals vis-à-vis the Singapore dollar.

The Group's strong financial position strengthens its ability to invest in capital expenditure to upkeep and enhance the airport facilities, as well as to fund significant development projects. Property, plant and equipment and investment property amounted to S\$7.7 billion, which accounted for 51.3% of total assets. During the year, the Group invested close to S\$1.5 billion for the upkeep of airport facilities as well as for capacity enhancement such as T1's expansion, Jewel, the three-runway system and the ongoing Changi East development.

Intangible assets of S\$4.6 billion arose from the consolidation of Tom Jobim Airport and comprised

largely the unamortised cost of the Group's concession right to operate and manage Tom Jobim Airport for a period of 25 years, starting from 2014. Correspondingly, the Group recorded concession payable amounting to S\$3.1 billion which represents the obligations that Tom Jobim Airport has to pay for the right to operate it.

Cash and cash equivalents amounted to S\$1.8 billion. The surplus cash has been earmarked for the funding of on-going development projects.

An interim sinking fund was created in FY2016/17 to set aside funding for the Changi East development project. During the year, S\$96 million was channeled into the sinking fund reserve from the Group's retained earnings, bringing the cumulative sinking fund reserve to S\$506 million.

The Group's total loan and borrowings of S\$1.7 billion comprised largely bank loans used to support the construction of Jewel Changi Airport (S\$953 million) and loans undertaken by Tom Jobim Airport to fund its concession payments obligations (S\$472 million).

# Corporate Governance

The Board and Management of CAG are deeply committed to our Company's core value – integrity – which is at the heart of all we do. We strive to meet and maintain the highest standards of corporate governance, professionalism and integrity, to build a company which 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, CAG strongly believes in being accountable to its immediate business and regulatory environment, as well as to the global community.

CAG's Code of Conduct sets out the principles, policies and standards of conduct that it expects of all employees in their day-to-day activities and in the decisions they make. The Company has recently enhanced its whistle-blowing policy to detect and deter unethical or illegal conduct, and to protect whistle-blowers from retaliation.

## THE BOARD OF DIRECTORS

1. CAG'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 Group, while protecting the interests of stakeholders.

### Composition and Balance

2. Headed by Non-Executive Chairman, Mr Liew Mun Leong, the Board comprises 12 Directors. Mr Lee Seow Hiang, our CEO, is the only executive member of the Board. The majority 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:

Mr Liew Mun Leong - Chairman  
Mr Lee Seow Hiang - CEO  
Mrs Tan Ching Yee - Shareholder Representative  
Mr Michael George William Barclay  
Mr Eric Ang Teik Lim  
Mr Danny Teoh Leong Kay  
Mr Richard R. Magnus  
Professor Tan Kong Yam  
Mr Tan Gee Paw  
Mr Ng Chee Khern  
Mr Chia Song Hwee  
Mr Kelvin Fan  
Mr Lim Zhi Jian  
(Alternate Director to Mrs Tan Ching Yee)

The profiles of the Directors can be found on pages 20 to 25 in this annual report. Changi Airports International Pte Ltd (CAI), a wholly-owned subsidiary of CAG, has a separate Board of Directors.

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 CAG's businesses and implementation of the Group's strategies and policies.
5. Nine 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) and Technology Development Committee (TDC). Each committee is governed by its own terms of reference, which sets 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 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 members of the EXCO are:

Mr Liew Mun Leong - Chairman  
Mrs Tan Ching Yee

Mr Eric Ang Teik Lim  
Mr Richard R. Magnus  
Mr Lee Seow Hiang

2. The EXCO reviews and recommends to the Board financing and investment strategies of the CAG 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 issuance, opening of bank accounts as well as hedging policies. The EXCO also sets the financial limits for operations, procurement and treasury of the Company.
3. The Company expects to take on significant debt in the coming years to finance the development of Changi East and T5. In light of this, the CMC was established at the end of 2018 to provide specific oversight in the area of capital management.
4. The CMC comprises five Directors:  
  
Mr Eric Ang Teik Lim - Chairman  
Mr Danny Teoh Leong Kay  
Mr Lim Zhi Jian  
Mr Chia Song Hwee  
Mr Lee Seow Hiang
5. The role of the CMC is to review and recommend to the CAG Board or EXCO the financing strategies and plans of CAG (debt capital market issuances and bank facilities) as well as to guide and advise Management on the financing execution strategy.

## EXECUTIVE RESOURCE AND COMPENSATION

1. The ERCC comprises the following non-executive Directors:  
  
Mr Liew Mun Leong - Chairman  
Mr Eric Ang Teik Lim  
Mr Chia Song Hwee
2. The ERCC supports and advises the Board on remuneration matters, leadership succession and development. The roles of the ERCC include:
  - a. reviewing and approving the policy for determining executive remuneration, including the remuneration packages, service contract terms and benefits programme for key management executives;
  - b. 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

- c. recommending the remuneration framework, including Directors' 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 non-executive Directors:  
  
Mr Danny Teoh Leong Kay - Chairman  
Mrs Tan Ching Yee  
Mr Eric Ang Teik Lim
3. The primary role of the AC is to assist the Board to review the adequacy of the Company's internal control systems in ensuring that the financial records have been properly maintained and its financial statements give a true and fair view of the Company's performance and position. In addition, the AC is also responsible for reviewing the effectiveness of financial, compliance and risk management frameworks, as well as the robustness of the reporting processes. The AC also reviews the adequacy of mechanisms put in place for the Company's employees, partners, suppliers and contractors to raise concerns in confidence, as well as the procedures for independent investigation, follow-up and resolution of the matters reported.
4. 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.
5. 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 also reviews the internal audit reports to verify the effectiveness and timeliness of actions

taken by Management on the internal auditors' recommendations and observations.

6. 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 Indicator 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.
7. 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.
8. The AC also serves as the governing body to provide oversight on the effective implementation of CAG's anti-bribery management system.

## 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, and financial and strategic (business) risk management to the AC, which ensures 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 system put in place by Management.
2. The internal controls established by the Company are supported by systems, processes and people. CAG's three lines of defence of risk management are as follows:
  - ◆ the first line of defence is the business units who are responsible for identifying and managing risks inherent in their businesses;
  - ◆ the second line of defence comprises the oversight and control functions such as

Enterprise Risk Management (ERM), Legal and Compliance, Aerodrome Safety, Aviation Security, Information Security, and Enterprise Performance; and

- ◆ the third line of defence is IA, which provides an independent assessment and assurance on the reliability, adequacy and effectiveness of CAG's system of internal controls, risk management procedures, governance framework and processes.
3. The Company's internal and external auditors review CAG's 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.
  5. Over the past year, as part of the implementation of CAG's anti-bribery management system, all employees have undergone anti-bribery training, and divisions have performed bribery risk assessments, identified and put in place appropriate mitigating measures.
  6. A separate TC evaluates and approves the award of tenders for goods and services exceeding S\$50 million in value, with the exception of those related to new development projects and major redevelopment projects at Changi Airport, which come under the purview of the ECAD. The TC is chaired by a non-executive Director and comprises the following Directors:

Mr Michael George William Barclay - Chairman  
Mr Richard R. Magnus  
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 its audit work, focusing on key internal controls, including financial, operational and compliance controls. 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 adopting more continuous auditing going forward.
9. Audits are carried out on all significant business units and processes in the Company. The annual audit plan is developed in consultation with, but is independent of, Management and is approved by the AC. IA's report on findings and recommendations are submitted to the AC and a summary of key findings and recommendations are 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 findings.

## AIRPORT DEVELOPMENT

1. The ECAD currently comprises four Directors and six non-voting co-opted members, who provide additional advice and expertise in relation to the development projects.

The four Directors are:

Mr Liew Mun Leong - Chairman  
 Mr Tan Gee Paw  
 Mr Lim Zhi Jian  
 Mr Lee Seow Hiang

The six co-opted members are:

Professor Lui Pao Chuen  
 Ms Patricia Chia  
 Mr Chua Hua Meng  
 Mr Goh Hup Chor  
 Mr Lim Bok Ngam  
 Mr Tham Kui Seng

2. The ECAD oversees new development and major redevelopment projects at Changi Airport. The roles of the ECAD include:
  - a. 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

- b. reviewing and approving tenders for goods and services exceeding S\$50 million related to development projects at Changi Airport.

## ENTERPRISE RISK MANAGEMENT

1. CAG manages a wide range of risks which includes operational and safety, regulatory, financial, and developmental projects risks. With increasing passenger numbers and the completion of T4, one of CAG's key challenges is to maintain safe, secure and efficient operations at Changi Airport.
2. There is clarity in risk ownership, roles and responsibilities at the Company's business units. Each key development project such as the Changi East Development has a dedicated risk team, whose role is to identify and aggregate the project's current and emerging risks which impact timelines, costs, quality and safety, and to regularly report the project's top risks and mitigation measures to the Company's Risk Committee (RC), through the ERM Division.

### Risk Governance

3. Both the Board and Management are responsible for the management of risks in CAG. The Board, through the ORSC, provides oversight on operational and safety risks, while the review of the Company's financial and strategic risks are assisted by the AC.
4. The ORSC comprises two Directors and two co-opted members, who provide additional advice and expertise to the committee.
5. The two Directors are:
 

Mr Michael George William Barclay - Chairman  
 Mr Richard R. Magnus

The two co-opted members are:

Mr Wong Woon Liong  
 Mr Tan Kian Huay
6. Management leads the Company's efforts in developing and strengthening its risk management processes and framework through the RC, supported by the ERM division.
7. Reporting to the AC and ORSC, 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 provide directions to strengthen the implementation of ERM in the Company.

### **Risk Awareness Culture**

7. At CAG, every employee and everyone working in the airport community is a valued manager of risks. Therefore, the RC, through the ERM Division, continues with its engagement efforts through inter-divisional risk workshops and meetings with risk owners.
8. The ERM Division also conducts regular courses on the fundamentals of risk identification, assessment, mitigation, review and reporting to divisional risk owners to institutionalise ERM and enhance the risk awareness culture.
9. The ERM Division adopts the key strategy of collaborating with divisions across the Company to address key risks. During the year, ERM has embarked on several projects, focusing on areas such as strengthening critical engineering systems reliability, enhancing resilience to cybersecurity attacks, promoting anti-bribery initiatives, and supporting CAG's comprehensive insurance programme.

### **NOMINATING COMMITTEE**

1. Established at the end of 2018, the NC comprises four Directors, as follows:

Mr Liew Mun Leong - Chairman  
Ms Tan Ching Yee  
Mr Eric Ang Teik Lim  
Mr Chia Song Hwee

2. The NC reviews the structure, size, composition, core competencies and skills required by CAG Board and its committees (Board Committees) to support the strategic objectives and values of CAG, and makes relevant recommendations to the Board.

### **TECHNOLOGY DEVELOPMENT COMMITTEE**

1. The TDC comprises four Directors and one co-opted member who provides additional advice and expertise to the committee. They are:

Mr Ng Chee Khern - Chairman  
Mr Chia Song Hwee  
Mr Lim Zhi Jian  
Mr Lee Seow Hiang  
Prof Lui Pao Chuen - co-opted member

2. The TDC provides guidance to Management on innovations driven by technology, as well as the development of technological capabilities in support of CAG's transformation. It also reviews and recommends technology investments to the CAG Board and/or EXCO for approval.

# Business and Operations Review

# CHANGI







## AFRICA

### Eastern Africa

Burundi  
Ethiopia  
Kenya  
Mauritius  
Rwanda  
Tanzania  
Uganda

### North Africa

Chad  
Seychelles

### South Africa

Botswana  
Congo  
Mozambique  
South Africa

### West Africa

Burkina Faso  
Ghana  
Ivory Coast  
Niger  
Nigeria  
Republic of Congo  
Zimbabwe

## ASIA

### Central Asia

Turkmenistan\*  
Uzbekistan

### Middle East

Bahrain  
Egypt  
Qatar  
Saudi Arabia  
United Arab Emirates

### Northeast Asia

China  
Hong Kong, SAR  
Japan  
Macau  
South Korea  
Taiwan

### South Asia

Bangladesh  
Bhutan  
India  
Maldives  
Nepal  
Sri Lanka

### Southeast Asia

Brunei Darussalam  
Cambodia  
Indonesia  
Laos  
Malaysia  
Myanmar  
Philippines  
Thailand  
Vietnam

## SOUTHWEST PACIFIC

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

28

CITY LINKS

127

CITY LINKS

67

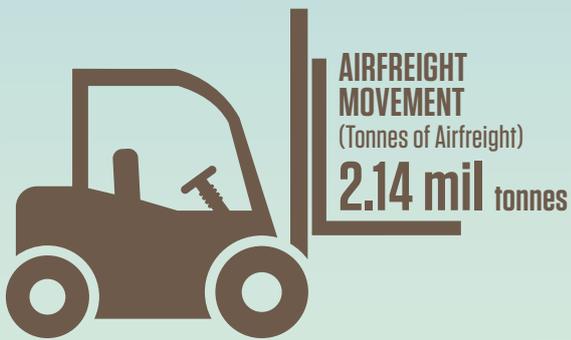
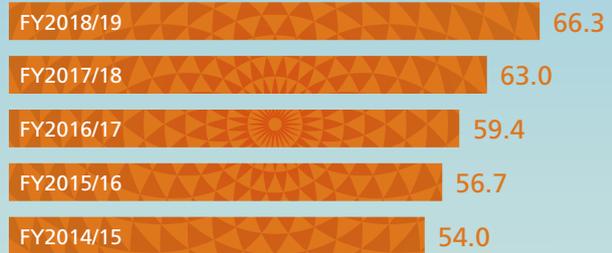
CITY LINKS



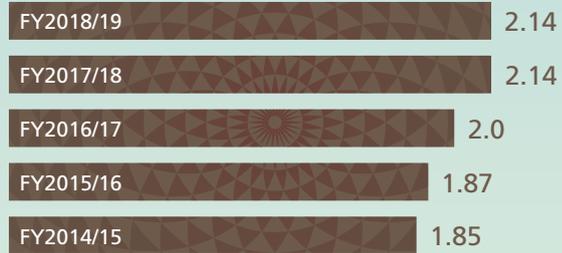
# Air Traffic Statistics



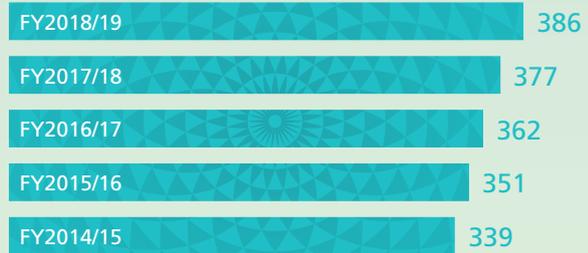
(in millions)



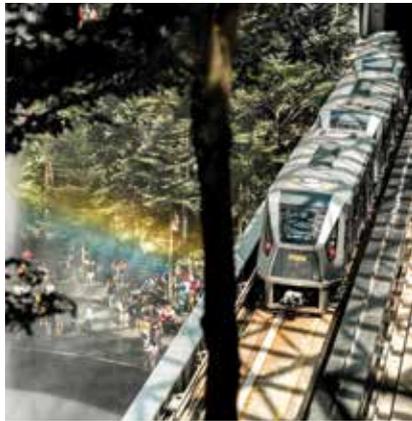
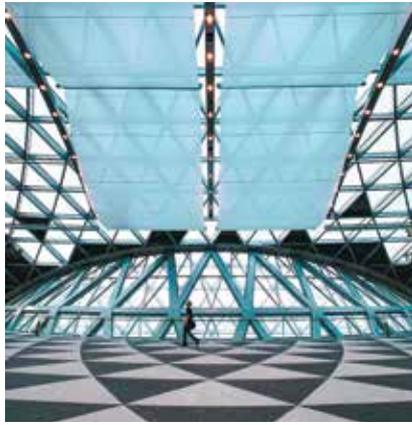
(in millions)



(in thousands)



# @changiairport on Instagram



253k

FOLLOWERS

# Connecting The World

## MAKING THE WORLD SMALLER

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

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

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

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

\* This service has since ceased operations.





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

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



### DEEPENING LONG-HAUL CONNECTIONS

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

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

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

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

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

### STRENGTHENING CHANGI'S ROLE IN THE REGION

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

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

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

## GROWING TRAVEL DEMAND WITH OUR PARTNERS

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

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

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

## CHANGI AS A CARGO HUB

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

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

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

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

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



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



## Open mind, successful partnerships

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

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

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

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

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

**Alicia Chen**  
Senior Manager,  
Airline Development





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

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



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

### DELIVERING INNOVATIVE EXPERIENCES

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

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

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

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

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

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

### CREATING MAGICAL MOMENTS AT CHANGI

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

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

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

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

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

### CELEBRATING A LABOUR OF LOVE

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

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

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

### A ONE CHANGI SYMPHONY

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

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

#### Left:

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

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

### BUILDING TO SERVE YOU BETTER

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





## FAST and streamlined departure experience

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

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

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

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

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

### **Chua Ching Hock**

Senior Manager,  
Departure Experience,  
Airport Operations

# Re-inventing The Changi Retail Experience

## PLETHORA OF DELIGHTS TO THRILL PASSENGERS

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

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

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

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



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

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

### REWARDING RETAIL EXPERIENCES

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

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

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

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



fans gathered to cheer for their favourite teams.

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

### REINVENTING RETAIL AT THE AIRPORT

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

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

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

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

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

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

### DUTY-FREE SHOPPING AT YOUR FINGERTIPS

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

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

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

#### INNOVATIVE PARTNERSHIPS

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

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

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

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

average of 100 passengers a day interact with Pepper.

#### OPTIMISING SPACE FOR COMMERCIAL GROWTH

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

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

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



#### Left:

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



## Piecing together a retail heaven jigsaw

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

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

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

### **Chandra Mahtani**

Vice President,  
Terminal 5 Commercial Planning

# Being Operationally Prepared

## RAISING SAFETY TO THE NEXT LEVEL

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



### RECERTIFYING CHANGI AND SELETAR AERODROMES

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

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

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

### PREPARING FOR EMERGENCIES

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

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

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

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



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

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

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

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

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

### INSTILLING SAFETY AWARENESS

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

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

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

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

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

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

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

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

### IMPROVING AIRPORT SECURITY PROCESSES

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

### INCREASING PRODUCTIVITY THROUGH APRON WI-FI

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

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

### WIDENING AIRPORT BOULEVARD

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

### EXPANDING THE SKYTRAIN FLEET

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

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

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

### ENHANCING AIRSIDE STAFF WELFARE

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



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



## Improving the lives of passengers

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

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

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

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

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

### **Au Lye Quee**

Senior Manager

Engineering Management & Systems Planning

# Building for the Future

## INVESTING FOR GROWTH

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

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

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

### CHANGI EAST

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



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

### BUILDING AHEAD WITH T5

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

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

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

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





for the development. The firms appointed are:

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

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

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

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

### COMPLETION OF RUNWAY 3

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

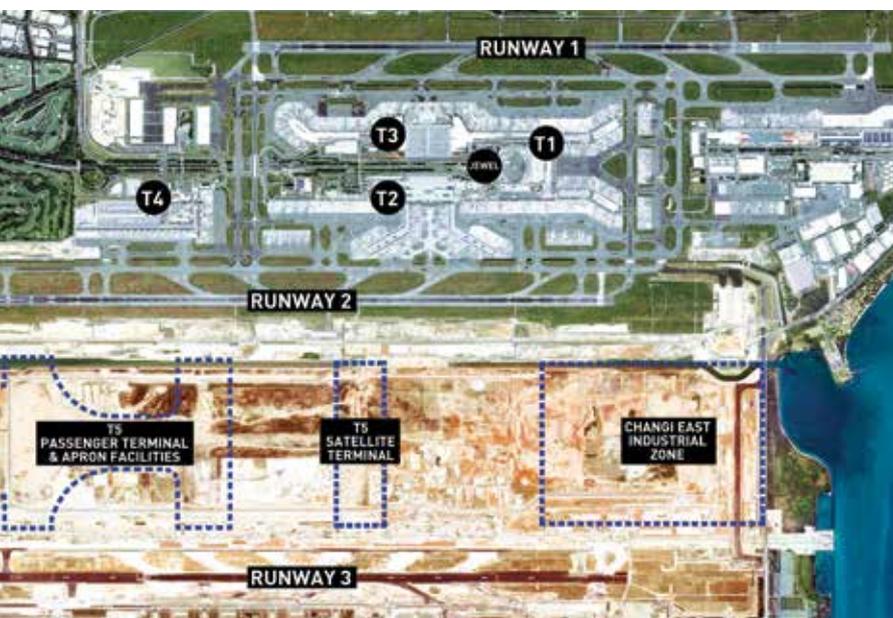
CAG has completed the strengthening of Runway 3 for future civil aviation use and extended it from 2.75 kilometres to 4.0 kilometres. The strengthening work involved paving the runway with four layers of materials, totalling 2.65m in depth, to allow it to withstand the pressure of heavier commercial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

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

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

### OPERATIONALISATION OF THE CHANGI EAST CHECKPOINT

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



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

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

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

### UTILISING NEW TECHNOLOGY TO ENHANCE SAFETY ON-SITE

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

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

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



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

### LAUNCH OF SELETAR AIRPORT'S NEW TERMINAL

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

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



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

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

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

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

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

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



## A Jewel in Singaporeans' hearts

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

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

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

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

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

### **Hung Jean**

Chief Executive Officer,  
Jewel Changi Airport Development Pte Ltd

# Creating International Impact

## ENLIVENING AIRPORTS, CREATING POSSIBILITIES

64

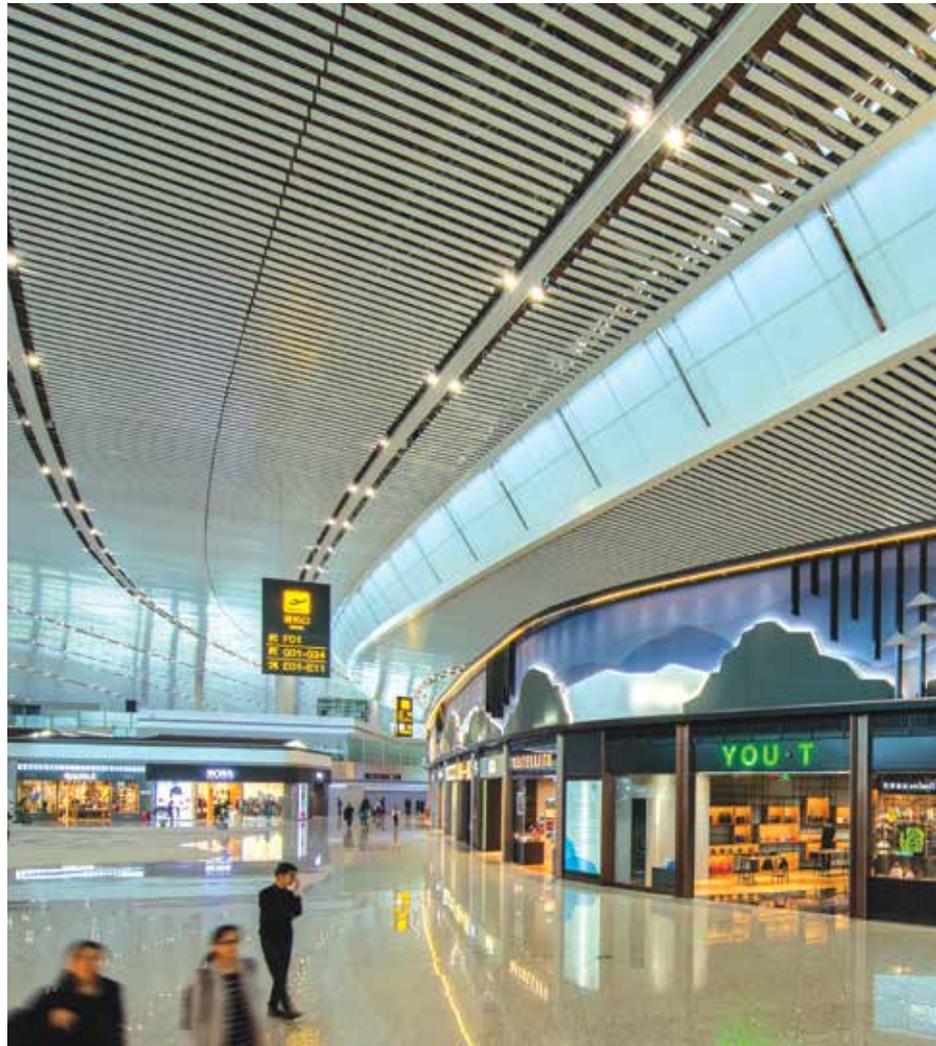
CHANGI AIRPORT GROUP

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

### BRAZIL

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

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



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

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

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





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

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

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



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

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

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

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

#### CHINA

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

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

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

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

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

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

#### INDIA

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

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

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

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

### JAPAN

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

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

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

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

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

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

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

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

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

### THE PHILIPPINES

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

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

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

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

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





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

airport's capacity to eight million passengers per annum.

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

## **RUSSIA**

### **Krasnodar**

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

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

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

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

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

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

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

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

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

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

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

### **Vladivostok**

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

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

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

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

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

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

# Attracting The Best Talents

## EMPOWERING TALENTS TO DEVELOP AND SHINE

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

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

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

### PEOPLE EXPERIENCE AND ENGAGEMENT

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



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



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

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

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



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

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

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

### ENHANCING INTERNAL COMMUNICATIONS

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

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

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

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

### WORKPLACE ENHANCEMENTS

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

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



# Contributing to Communities

## DOING THE RIGHT THING AND DOING THINGS RIGHT

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

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

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

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





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

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

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

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

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

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

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

## SUSTAINABILITY

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

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

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

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

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



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

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

# Engaging Fans Worldwide

## KEEPING OUR FINGER ON THE PULSE



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

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

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

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

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

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

### SOCIAL MEDIA CHANNELS STATISTICS

#### Facebook

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

#### Twitter

 **97,045**  
FOLLOWERS +32%

#### Instagram

 **244,933**  
FOLLOWERS +58%



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

## INDUSTRY AWARDS



### Best Digital and Social Media Offer

DFNI-Frontier Asia Pacific Awards 2019



### Best KOL-led Campaign

Moodies 2019 (#BelanjaDiChangi)



### Best Client-Initiated Idea (Silver)

Hall of Fame 2018 (Nas Daily at Changi Airport)



### Best Real-time Response Campaign (Silver)

Hall of Fame 2018 (Nas Daily at Changi Airport)



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

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



## LAUNCHING JEWEL TO THE WORLD

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

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



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

## VISUAL STORYTELLING

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

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

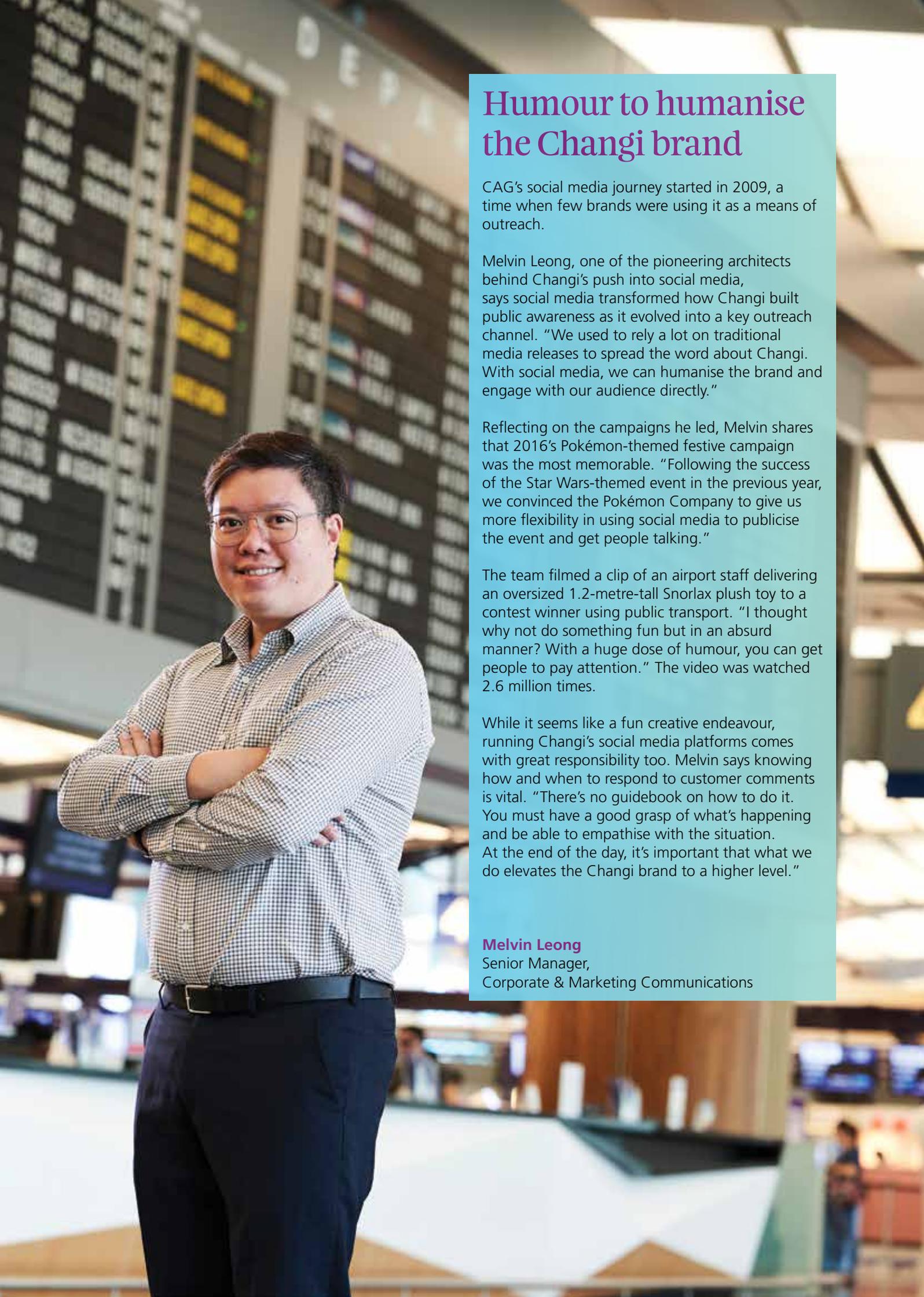
Another heartwarming short film was launched on Valentine's Day, focussing on the most underrated service offered to passengers – the airport trolleys. Making the inanimate come to life, a love story was crafted around Changi's landside and airside trolleys, showing their adventure within the airport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

## SWIFT AUTOMATED SOCIAL CUSTOMER CARE

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

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

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



## Humour to humanise the Changi brand

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

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

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

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

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

### Melvin Leong

Senior Manager,  
Corporate & Marketing Communications

# Group Financial Summary

The Group Financial Summary as set out on pages 76 to 88 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 2019.

For a full understanding of the state of affairs of the Company and the Group as at 31 March 2019 and of the results of the Group for the financial year ended 31 March 2019, 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>76</b> Directors' Statement	<b>84</b> Consolidated Statement of Changes in Equity
<b>78</b> Independent Auditor's Report	<b>85</b> Consolidated Statement of Cash Flows
<b>81</b> Consolidated Income Statement	<b>87</b> Listing of Significant Companies in the Group
<b>82</b> Consolidated Statement of Comprehensive Income	
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# Directors' Statement

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2019

The directors present their statement to the member together with the audited financial statements of the Group for the financial year ended 31 March 2019 and the balance sheet of the Company as at 31 March 2019.

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 81 to 86 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 2019 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 Liew Mun Leong	
Mr Eric Ang Teik Lim	
Mr Michael George William Barclay	
Mr Chia Song Hwee	(Appointed on 1 October 2018)
Mr Kelvin Fan Sui Siong	(Appointed on 15 August 2018)
Mr Richard R Magnus	
Mr Ng Chee Khern	
Mrs Tan Ching Yee	
Mr Tan Gee Paw	
Mr Tan Kong Yam	
Mr Danny Teoh Leong Kay	
Mr Lim Zhi Jian	(Alternate director to Mrs Tan Ching Yee)
Mr Lee Seow Hiang	

## 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.

# Directors' Statement

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2019

## 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



**Liew Mun Leong**  
Director



**Lee Seow Hiang**  
Director

28 May 2019

# 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, Chapter 50 (the "Act") and Financial Reporting Standards in Singapore ("FRSs") 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 2019 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 2019;
- the consolidated statement of comprehensive income of the Group for the financial year then ended;
- the balance sheets of the Company and the Group as at 31 March 2019;
- 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.

### Other Information

Management is responsible for the other information. The other information refers to 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 FRSs, 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.
- 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.

# 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)

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.

# Consolidated Income Statement

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2019

	Group	
	2019 \$'000	2018 \$'000
Revenue	3,039,915	2,601,829
Expenses		
- Employee compensation	(307,974)	(256,593)
- Depreciation of property, plant and equipment	(502,596)	(344,016)
- Amortisation of intangible assets	(43,472)	(13,292)
- Property tax	(68,595)	(63,926)
- Maintenance of land, buildings and equipment	(304,398)	(260,421)
- Services and security related expenses	(309,689)	(243,919)
- Annual ground rent and licence fees	(79,009)	(79,810)
- CAAS services	(227,859)	(220,458)
- Regulatory contribution	(84,921)	-
- Other operating expenses	(191,497)	(166,523)
Total expenses	<u>(2,120,010)</u>	<u>(1,648,958)</u>
<b>Operating profit</b>	<b>919,905</b>	<b>952,871</b>
Finance expenses	(212,580)	(57,524)
Other income and losses - net	94,322	116,493
Share of results of associated companies and joint ventures	<u>12,408</u>	<u>(3,081)</u>
<b>Profit before income tax</b>	<b>814,055</b>	<b>1,008,759</b>
Income tax expense	<u>(240,366)</u>	<u>(173,858)</u>
<b>Profit after tax</b>	<b>573,689</b>	<b>834,901</b>
<b>Profit after tax attributable to:</b>		
Equity holder of the Company	677,276	849,299
Non-controlling interests	<u>(103,587)</u>	<u>(14,398)</u>
	<b>573,689</b>	<b>834,901</b>

# Consolidated Statement of Comprehensive Income

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2019

	Group	
	2019 \$'000	2018 \$'000
<b>Profit after tax</b>	<b>573,689</b>	834,901
<b>Other comprehensive loss:</b>		
<i>Items that will not be reclassified subsequently to profit or loss:</i>		
Share of reserve of associated company	<b>5,309</b>	9,591
<i>Items that may be reclassified subsequently to profit or loss:</i>		
Cash flow hedges		
- Fair value gains	<b>7,826</b>	1,846
- Share of hedging reserve from an associated company	<b>(13,154)</b>	-
Currency translation losses	<b>(243,470)</b>	(20,848)
<b>Other comprehensive loss, net of tax</b>	<b>(243,489)</b>	(9,411)
<b>Total comprehensive income</b>	<b>330,200</b>	825,490
<b>Total comprehensive income attributable to:</b>		
Equity holder of the Company	<b>544,407</b>	838,981
Non-controlling interests	<b>(214,207)</b>	(13,491)
	<b>330,200</b>	825,490

# Balance Sheets

AS AT 31 MARCH 2019

	Group		Company	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
<b>ASSETS</b>				
<b>Current assets</b>				
Cash and cash equivalents	1,762,845	2,064,924	1,588,829	1,740,605
Trade and other receivables	297,478	321,133	207,254	241,854
Other current assets	31,338	37,383	21,016	24,795
Other investments	102,677	102,581	102,677	102,581
Derivative financial instruments	8,207	-	8,207	-
Inventories	12,518	13,541	7,534	8,089
Tax recoverable	9,733	37,245	-	-
	<b>2,224,796</b>	<b>2,576,807</b>	<b>1,935,517</b>	<b>2,117,924</b>
<b>Non-current assets</b>				
Trade and other receivables	-	-	1,322,488	1,130,375
Other non-current assets	735	254	8,844	5,795
Property, plant and equipment	6,254,006	5,610,349	6,190,833	5,568,598
Intangible assets	4,619,135	5,037,716	-	-
Investments in subsidiaries	-	-	263,767	257,967
Investments in associated companies and joint ventures	345,680	266,648	11,947	11,947
Investment property under development	1,492,275	1,117,766	-	-
Other investments	7,909	7,789	7,657	7,789
Deferred income tax assets	163,755	276,130	-	-
	<b>12,883,495</b>	<b>12,316,652</b>	<b>7,805,536</b>	<b>6,982,471</b>
<b>Total assets</b>	<b>15,108,291</b>	<b>14,893,459</b>	<b>9,741,053</b>	<b>9,100,395</b>
<b>LIABILITIES</b>				
<b>Current liabilities</b>				
Trade and other payables	1,227,012	1,014,995	929,658	746,622
Concession payable	24,453	425,444	-	-
Loan and borrowings	1,009,623	134,087	-	90,000
Derivative financial instruments	137	-	-	-
Income received in advance	27,369	17,711	15,275	13,208
Deferred income	12,830	15,343	4,311	4,311
Current income tax liabilities	189,742	200,038	187,291	197,652
	<b>2,491,166</b>	<b>1,807,618</b>	<b>1,136,535</b>	<b>1,051,793</b>
<b>Non-current liabilities</b>				
Trade and other payables	145,323	152,897	133,215	145,362
Concession payable	3,065,657	3,069,314	-	-
Loan and borrowings	642,228	1,197,819	-	-
Derivative financial instruments	-	2,674	-	-
Deferred income	203,526	154,103	150,130	84,412
Deferred income tax liabilities	99,201	72,492	98,762	72,218
	<b>4,155,935</b>	<b>4,649,299</b>	<b>382,107</b>	<b>301,992</b>
<b>Total liabilities</b>	<b>6,647,101</b>	<b>6,456,917</b>	<b>1,518,642</b>	<b>1,353,785</b>
<b>NET ASSETS</b>	<b>8,461,190</b>	<b>8,436,542</b>	<b>8,222,411</b>	<b>7,746,610</b>
<b>EQUITY</b>				
Share capital and reserves	3,548,624	3,585,150	3,791,566	3,689,934
Retained profits	4,290,167	4,014,786	4,430,845	4,056,676
	<b>7,838,791</b>	<b>7,599,936</b>	<b>8,222,411</b>	<b>7,746,610</b>
Non-controlling interests	622,399	836,606	-	-
<b>Total equity</b>	<b>8,461,190</b>	<b>8,436,542</b>	<b>8,222,411</b>	<b>7,746,610</b>

# Consolidated Statement of Changes in Equity

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2019

	Share capital	Hedging and other reserves	Currency translation reserve	Sinking fund reserve	Retained profits	Non-controlling interests	Total equity
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
<b>2019</b>							
<b>Beginning of financial year</b>	<b>3,280,387</b>	<b>21,188</b>	<b>(125,972)</b>	<b>409,547</b>	<b>4,014,786</b>	<b>836,606</b>	<b>8,436,542</b>
Dividend paid	-	-	-	-	(305,552)	-	(305,552)
Sinking fund contribution	-	-	-	96,343	(96,343)	-	-
Total comprehensive income	-	(1,262)	(131,607)	-	677,276	(214,207)	330,200
<b>End of financial year</b>	<b>3,280,387</b>	<b>19,926</b>	<b>(257,579)</b>	<b>505,890</b>	<b>4,290,167</b>	<b>622,399</b>	<b>8,461,190</b>
<b>2018</b>							
<b>Beginning of financial year</b>	<b>3,280,387</b>	<b>10,656</b>	<b>(105,122)</b>	<b>175,951</b>	<b>3,682,266</b>	<b>(7,411)</b>	<b>7,036,727</b>
Dividend paid	-	-	-	-	(283,183)	-	(283,183)
Sinking fund contribution	-	-	-	233,596	(233,596)	-	-
Capital contribution from non-controlling interest	-	-	-	-	-	584,356	584,356
Acquisition of a subsidiary with non-controlling interest	-	-	-	-	-	273,152	273,152
Total comprehensive income	-	10,532	(20,850)	-	849,299	(13,491)	825,490
<b>End of financial year</b>	<b>3,280,387</b>	<b>21,188</b>	<b>(125,972)</b>	<b>409,547</b>	<b>4,014,786</b>	<b>836,606</b>	<b>8,436,542</b>

# Consolidated Statement of Cash Flows

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2019

	2019 \$'000	2018 \$'000
<b>Cash flows from operating activities</b>		
Profit after tax	<b>573,689</b>	834,901
Adjustments for:		
- Income tax expense	<b>240,366</b>	173,858
- Depreciation of property, plant and equipment	<b>502,596</b>	344,016
- Amortisation of intangible assets	<b>43,472</b>	13,292
- Government grant	<b>(26,096)</b>	(21,809)
- Net loss on disposal of property, plant and equipment	<b>2,048</b>	1,290
- Impairment/(write back) of investment in associated companies	<b>9,600</b>	(13,012)
- Gain on remeasurement of previously held interest in an associated company	-	(40,229)
- Foreign currency losses recycled on deemed disposal of previously held interest in an associated company	-	31,033
- Bargain purchase on acquisition of a subsidiary - net	-	(61,192)
- Impairment of trade and other receivables	<b>2,952</b>	1,103
- Share of results of associated companies and joint ventures	<b>(12,408)</b>	3,081
- Unrealised currency translation differences	<b>(16,231)</b>	(1,213)
- Fair value (gain)/loss on financial assets held at fair value	<b>(2,623)</b>	904
- Fair value gain on derivatives	<b>(1,834)</b>	-
- Amortisation of deferred income	<b>(15,343)</b>	(5,862)
- Finance expense	<b>212,580</b>	57,524
- Interest income	<b>(42,458)</b>	(43,675)
- Gain on dilution of interest in associated company	<b>(29,782)</b>	-
- Regulatory contribution	<b>84,921</b>	-
	<b>1,525,449</b>	1,274,010
Changes in working capital		
- Inventories	<b>1,023</b>	(503)
- Trade and other receivables	<b>48,955</b>	(15,493)
- Other assets	<b>8,280</b>	(2,445)
- Trade and other payables	<b>43,508</b>	128,129
Cash generated from operations	<b>1,627,215</b>	1,383,698
Interest received	<b>47,075</b>	62,640
Interest paid	<b>(62,623)</b>	(26,608)
Government grants received	<b>26,096</b>	21,809
Income tax paid	<b>(140,845)</b>	(193,903)
<b>Net cash provided by operating activities</b>	<b>1,496,918</b>	1,247,636

# Consolidated Statement of Cash Flows

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2019

	2019 \$'000	2018 \$'000
<b>Cash flows from investing activities</b>		
Additions to property, plant and equipment and capital work-in-progress	<b>(1,129,861)</b>	(1,036,866)
Additions to investment property under development	<b>(305,746)</b>	(282,798)
Additions to intangible assets	<b>(38,629)</b>	(11,873)
Payment of concession liabilities	<b>(370,034)</b>	(1,031,961)
Net cash acquired on acquisition of a subsidiary	-	114,823
Proceeds from return of capital from an associated company	-	7,581
Proceeds from return of capital from a fund investment	<b>1,592</b>	-
Proceeds from disposal of property, plant and equipment	<b>280</b>	56
Payment for investment in associated companies and joint ventures	<b>(91,422)</b>	(193,821)
Dividend income received	<b>7,040</b>	-
Purchase of financial assets at fair value through profit or loss	<b>(1,732)</b>	(107,030)
Purchase of held-to-maturity financial assets	-	(3,107)
Proceeds from financial assets at amortised cost / held-to-maturity financial assets	<b>2,750</b>	120,500
<b>Net cash used in investing activities</b>	<b>(1,925,762)</b>	(2,424,496)
<b>Cash flow from financing activities</b>		
Proceeds from loan and borrowings, net of transactions costs	<b>518,469</b>	658,030
Repayment of loan and borrowings	<b>(144,138)</b>	(411,956)
Restricted bank deposits	<b>(71,378)</b>	-
Capital contribution from non-controlling interest	-	584,356
Dividend paid to equity holder of the Company	<b>(305,552)</b>	(283,183)
Government grant received	<b>70,028</b>	-
<b>Net cash from financing activities</b>	<b>67,429</b>	547,247
<b>Net decrease in cash and cash equivalents</b>		
Cash and cash equivalents at beginning of financial year	<b>2,064,924</b>	2,693,847
Effects of currency translation on cash and cash equivalents	<b>(12,042)</b>	690
<b>Cash and cash equivalents at end of financial year</b>	<b>1,691,467</b>	2,064,924

# Listing of Significant Companies in the Group

Name of companies	Principal activities	Country of business / incorporation	Equity holding	
			2019 %	2018 %
<b>Significant subsidiaries</b>				
<b>Held by the Company</b>				
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
<b>Held by the Group</b>				
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
Changi Airports International Capital Pte. Ltd. <sup>(a)</sup>	Other investment holding	Singapore	<b>100</b>	100
Changi Airport Saudi Ltd. <sup>(b)</sup>	Provision of airport management and operations services	Saudi Arabia	<b>100</b>	100
Rio de Janeiro Aeroporto S.A. <sup>(c)</sup>	Investment holding	Brazil	<b>100</b>	100
Concessionária Aeroporto Rio de Janeiro S.A. <sup>(c)</sup>	Airport concessionaire	Brazil	<b>51</b>	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>	-
Jewel Changi Airport Trust <sup>(a)</sup>	Project development, operation and management	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>60</b>	60

# Listing of Significant Companies in the Group

Name of companies	Principal activities	Country of business / incorporation	Equity holding	
			2019 %	2018 %
<b>Significant associated companies and joint ventures</b>				
<b>Held by the Company</b>				
Experia Events Pte Ltd <sup>(c)</sup>	Organising and management of conferences, exhibitions and other related activities	Singapore	<b>20</b>	20
<b>Held by the Group</b>				
Bengal Aerotropolis Projects Ltd <sup>(c) (d)</sup>	Development of airport and township projects	India	<b>30.2</b>	30.2
Transport AMD-2 Ltd <sup>(c)</sup>	Investment holding	Cyprus	<b>30</b>	37.5
OJSC International Airport Sochi <sup>(c)</sup>	Provision of airport and airport-related services	Russia	<b>30</b>	37.5
OJSC International Airport Krasnodar <sup>(c)</sup>	Provision of airport and airport-related services	Russia	<b>30</b>	37.5
OJSC International Airport Anapa <sup>(c)</sup>	Provision of airport and airport-related services	Russia	<b>30</b>	37.5
Terminal Vladivostok <sup>(c)</sup>	Provision of airport and airport-related services	Russia	<b>33.3</b>	33.3
Vladivostok International Airport <sup>(c)</sup>	Provision of airport and airport-related services	Russia	<b>17.4</b>	17.4
Fukuoka International Airport Co., Ltd <sup>(c)</sup>	Provision of airport and airport-related services	Japan	<b>21</b>	-

(a) Audited by PricewaterhouseCoopers LLP, Singapore.

(b) Audited by PricewaterhouseCoopers, Saudi Arabia.

(c) Audited by other firms

(d) BAPL has obtained financing from a consortium of banks. As required in the financing agreement, a subsidiary of the Group has undertaken not to sell, assign or transfer its shareholding in BAPL without prior approval of the banks.



# Corporate Information

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