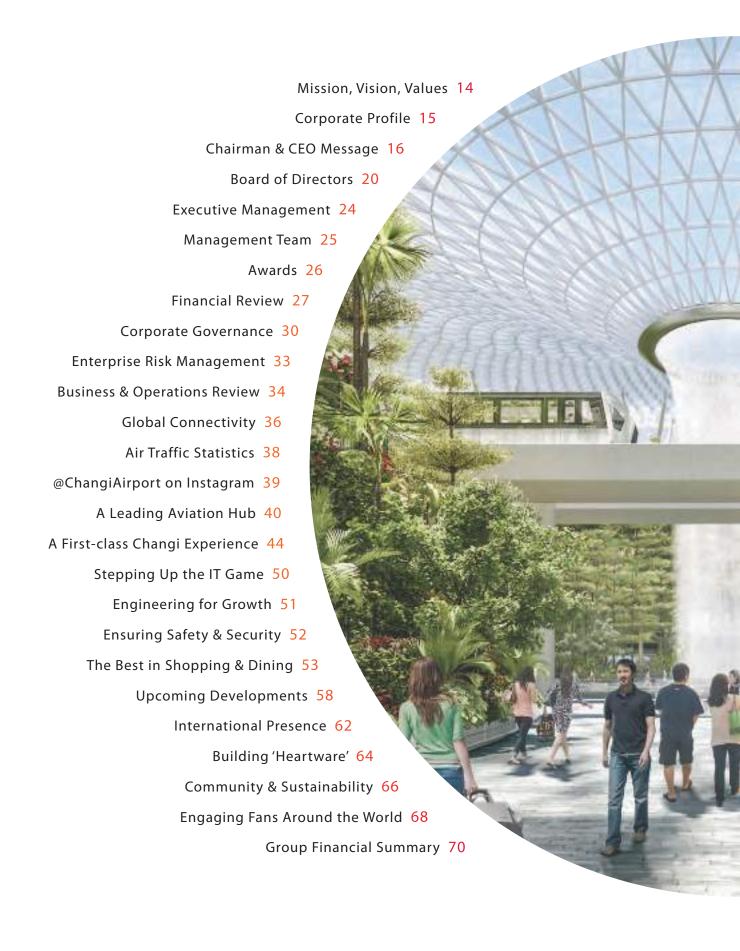


## **CONTENTS**













Changi Airport is one of the world's major air hubs, serving more than 56 million passengers and handling over 1.8 million tonnes of airfreight every year. With links to over 80 countries and territories, Changi connects millions of lives, bringing the world closer with an extensive network of 330 city links. Riding on our close-knit partnership with airlines, we continue to tap on new growth opportunities to expand Changi's connectivity and secure its position as the premier gateway to Asia.



















## MISSION, VISION, VALUES

### **MISSION**

To be the world's leading airport company, growing a 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**



## 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 part of the Civil Aviation Authority of Singapore (CAAS) – has successfully established Changi Airport as the world's most awarded airport. With more than 500 accolades under its belt, Changi has come a long way since its humble beginnings in 1981, when Terminal 1 first opened.

One of the world's busiest international airports today,

Changi Airport is a major air hub in Asia. It handled more than 56 million passenger movements in Financial Year (FY) 2015/16, serving about 100 airlines flying to more than 330 cities in about 80 countries and territories worldwide. With over 76,000 square metres of commercial space across its three 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, the Middle East, 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**



Financial year 2015/16 was a year of resilience and growth for CAG. Amidst challenging business conditions, we started off the year with a weaker first half, but saw a positive turnaround in the second half of the year as industry conditions improved.

We continued our journey of transformation as we prepared Changi Airport for the challenges and opportunities ahead. The development of Terminal 4 (T4), Jewel Changi Airport (Jewel) and Changi East all made good progress.

Operationally, Changi Airport continued to reach new heights. Passenger traffic for the year rose 5.1% to 56.7 million, an all-time high. On the retail front, Changi enjoyed another year of strong sales which rose 9.9% to more than \$\$2.2 billion. This was despite a more sombre retail environment in Singapore and in the travel sector.

Beyond the numbers, we did not lose sight of the importance of serving our customers well. Efforts to enhance the Changi Experience and to deepen our engagement with the airport community and passengers contributed to the recognition of Changi Airport as one of the world's best.

Changi received an unprecedented score of 4.974 (out of 5) in the Airport Service Quality survey organised by Airports Council International and was named Best Airport by 29 organisations and publications around the world during the year.

### A strong air hub

The Changi air hub plays an essential role in the growth of the Singapore economy. CAG spends significant effort and resources to engage airline partners to develop new routes from Singapore. During

the year, we saw the launch of eight new scheduled passenger and freighter airlines and eight new city links, expanding Changi's global network which now sees more than 100 airlines connecting Singapore to some 330 cities around the world.

Passenger traffic growth for the year was broad-based with traffic between Singapore and the Northeast Asia and Southeast Asia regions registering the strongest growth. In particular, China and Thailand recorded double-digit traffic growth.

In the area of airfreight, Changi Airport handled 1.87 million tonnes of cargo, an increase of 1.1% over the previous year. The star performer was pharmaceuticals, which grew close to 50% during the year. As the first airport in Asia to lead a community to seek certification on cold-chain pharmaceutical handling, Changi is well-placed to capture the opportunities offered in this segment.

### Award-winning experience

In our terminals, CAG continued to drive efficiency gains in the deployment of our resources. The Common User Passenger Processing System (CUPPS) was introduced airport-wide, enabling us to optimise check-in counter capacity as airlines are now able to use any counter for check-in.

We accelerated the roll-out of Fast and Seamless Travel (FAST) by bringing on board major carriers including Singapore Airlines, SilkAir, AirAsia, Cathay Pacific and Qantas. The FAST initiative offers passengers convenient self-service options for check-in, bag-drop, border clearance and boarding. Besides yielding a significant improvement in check-in throughput, passenger

experience has been kept high, with over 90% of FAST passengers indicating that they were satisfied or very satisfied with the FAST check-in process.

A major highlight of the Changi Experience during the year was the Star Wars festival during the 2015 year-end holidays. In conjunction with the Star Wars: The Force Awakens movie, the campaign was one of the boldest in Changi's history. It involved two life-sized replicas of Starfighters and a cast of movie characters which delighted our passengers and added to the excitement of travelling through Changi. To help spur spend, the campaign included the sale of eight exclusive Star Wars plush toys which was widely popular, with over 332,000 redemptions.

### World-class retail

Growth in retail sales at Changi Airport outpaced traffic growth. We have been able to achieve this due to a combination of factors, including the introduction of innovative concepts such as duplex stores, revitalisation of the retail mix and exciting retail campaigns.

We continue to attract new brands and to work with retail partners to exclusively launch new products to meet our shoppers' ever-changing needs and fancies. During the year, we saw the arrival of over 10 new-to-Changi brands, such as Zara's first airport duplex store and the Samsung Experience Store. The opening of The Fashion Gallery at Terminal 1 (T1) also brought famous labels such as Kenzo and Etro to our shoppers.

To keep our retail experience positively surprising, we enhanced the Shopping Concierge initiative with new Concierge desks at T1 and Terminal 3 (T3) to better help shoppers identify the best deals available. At the same time, with the strong online offering of more than 6,000 products at iShopChangi, the portal's sales and transaction volume more than doubled during the year.

### Changi Airports International

CAG's international arm, Changi Airports International (CAI), has been spreading Changi's presence globally and its growing footprint today includes Brazil, India, Russia and Saudi Arabia.

The performance of Brazil's Tom Jobim International Airport in Rio de Janeiro, in which we hold a 20.4% stake, has improved markedly. New features were added ahead of the 2016 Summer Olympics, including new check-in counters, holding areas and other facilities. Although the economic and political environment in Brazil continues to pose challenges, we remain positive on the long-term potential of our investment.

Our joint venture investment in Russia, covering four airports in the Krasnodar region, saw strong growth in passenger traffic totalling almost nine million in FY2015/16. This was an increase of 13% since the start of the venture in 2012. Service improvement remained a key priority, with a project launched to enhance service and develop training areas to align the passenger experience to international levels.

CAI also continues to be active in consultancy work. In Saudi Arabia, it has partnered the country's civil aviation regulator to manage and operate Dammam's King Fahd International Airport (KFIA) since 2008. The team helped to streamline operations and launch service improvements, cutting passenger

Within the company, the ingredient that makes CAG special can be found in its people. We were gratified to be named the Most Attractive Employer in Singapore by Randstad in 2016. This affirmed our efforts to build a staff community that is both productive and engaged.

processing time by nearly half. The work at KFIA has resulted in a doubling of passenger movements to around 10 million since the beginning of the partnership.

### People and community

Within the company, the ingredient that makes CAG special can be found in its people. We were gratified to be named the Most Attractive Employer in Singapore by Randstad in 2016. This affirmed our efforts to build a staff community that is both productive and engaged.

To foster greater interaction and provide a more conducive working environment, the Workplace Transformation project was launched in late-2014. Phase 1 has been completed and feedback from employees on the new workspaces has been overwhelmingly positive.

Another key initiative during the year was the introduction of the In.Touch mobile app that has transformed internal communication among CAG employees. With three in four staff having downloaded the app since its August 2015 launch, it has quickly become a common platform to share both official and lighter news, all in real-time.

Our focus on 'heartware' extends to the community. CAG's philanthropic initiative, Changi Foundation, has been supporting disadvantaged youths since it was started in 2012. Under the umbrella theme "Connecting with youths today, empowering them for a better tomorrow", the Foundation has helped over 3,000 youths through various programmes and activities.

As part of our SG50 programme, CAG pledged S\$5 for every S\$1 collected from the over 30 Changi Foundation donation boxes in 2015. A total of about S\$1.8 million have been contributed to the Foundation as a result of this effort.

### Strong financial performance

CAG delivered another set of strong financial results for FY2015/16. Operating revenue was stable at \$\$2.2 billion despite a number of cost relief incentives provided to airline and cargo partners to support them in a tough market environment. There was also a reduction in the passenger service charge for transfer and transit passengers.

The topline was supported by healthy growth of 7.2% in revenue from airport concessions and rental income. This was made possible by higher passenger traffic as well as a successful retail strategy that continued to meet the needs of discerning global passengers.

Operating expense increased by 2.3% year-on-year to S\$1.3 billion. This came on the back of higher expenses for development projects (T4, T1 Expansion and Changi East) resulting from increased headcount and service disruption prevention. Manpower-intensive contracts like cleaning and security also witnessed

annual contractual increases. The increase in operating expenses was mitigated by lower charges for CAAS services, tighter control of project costs and a cut in electricity charges with the drop in oil prices.

Earnings Before Interest, Taxes,
Depreciation and Amortisation
and Net Profit After Tax were
\$\$1.2 billion and \$\$784 million
respectively, comparable with
the previous year. Shareholder's
equity rose by \$\$463 million to
\$\$6.6 billion. A sinking fund reserve
of \$\$85 million apportioned out
of CAG's retained earnings has
been set aside for the Changi East
development project.

### Transformation for the future

CAG continues to build on the momentum of its development projects as we transform Changi Airport for the future. These developments are timely to ensure that we secure Changi's position as a premier air hub for the long term.

T4 will open for operations in the second half of 2017, increasing Changi Airport's handling capacity by 16 million passengers, to 82 million passengers a year. Construction of the new terminal, with a size of 225,000 square metres, is almost complete. The terminal's superstructure is completed, and work on the interior is in advanced stages. The contractors have been busy installing and testing the main operational components like the self check-in kiosks and baggage systems. T4 will also add another 21 contact gates at Changi Airport, bringing the total to 113 gates. There will be a comprehensive publicity and information campaign ahead of the terminal's opening.

On Jewel, construction is progressing as planned. Piling

has been completed and excavation work for the five basement levels well underway. For the levels above ground, the structural work has started, even as the interior design development for the key pieces like the façade, Rain Vortex, and Forest Valley move into the next phase. We look forward to Jewel's grand opening in early 2019.

Beyond the horizon, Changi East remains our most ambitious infrastructure project and represents the long-term future of Changi Airport. It is the most extensive construction project in Singapore, covering an area of 1,080 hectares, which is three times the size of the Marina Bay CBD. The project consists of several major programmes, including Terminal 5 (T5), a threerunway system, underground systems, a new cargo zone, and a host of infrastructure links. During the year, we partnered the Ministry of Transport for land preparation works which are going well. The next step for Changi East is to convert and lengthen the existing third runway used by the millitary, to one for joint civilian-millitary use.

### The way ahead

Changi Airport's positive performance on different fronts this year has laid a strong foundation for our future. Although the macro-economic outlook is cloudy, passenger traffic is expected to continue growing, although more modestly. We are discussing with airlines on new services to Southeast Asia, China, and India, as well as opportunities for enhancing our long-haul connectivity to Europe and Africa. We will buffet the challenges with new innovations and technology, building for the future with T4,

Jewel and Changi East, as well as investment in our people.

The global geo-political environment has changed significantly in the past year. As an airport operator, we take the twin responsibilities of ensuring safety and security seriously. We continue to work with the authorities and relevant agencies to review threats, assess how best to address them and ensure we are ready for all eventualities. We will spare no expense to tighten our cooperation with all parties to keep travel safe for our passengers, while continuing to build strong bonds among the airport community to ensure resilience in a time of crisis.

This was another good year for Changi Airport. For this, we express our appreciation to the management and staff of CAG, the larger Changi community, our many airline and airport partners, Ministry of Transport, Civil Aviation Authority of Singapore and our fellow Board Directors. It is with this spirit of One Changi that we will strive onwards to do even better, to set our course and take flight on our journey of transformation.

**Liew Mun Leong** Chairman

Lee Seow Hiang

**Lee Seow Hiang** Chief Executive Officer

## **BOARD OF DIRECTORS**





# 1. 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 President and CEO of CapitaLand Group. He is currently the Chairman of Surbana Jurong Private Limited. He also sits on the boards of Singapore Exchange, National University of Singapore (NUS) Business School, Human Capital Leadership Institute, Chinese Development Assistance Council and the Singapore China Foundation Ltd. He has been appointed by Temasek as Senior International Advisor to advise on global real estate investments. He also chairs Temasek Foundation Nurtures CLG Ltd.

In 2013, Mr Liew was appointed as Provost's Chair Professor (Practice) on pro bono service at both the NUS Business School and Faculty of Engineering.

He was elected the President of International Organisation for Standardisation (ISO) for the term 1997 to 1998. He was the Chairman of the Board of Governors of Temasek Polytechnic from 1999 to 2006.

With over 45 years of experience in construction and real estate industries both locally and overseas, Mr Liew has been instrumental in a number of Singapore's public sector projects, including the development of Changi Airport. 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 also published four books titled *Building People: Sunday Emails*  from a CEO, Volumes 1-3 and Building People Volume 4: Sunday Emails from a Chairman.

# 2. 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 Deputy Chairman of Changi Airports International Pte Ltd, and a Non-Executive Independent Director of SMRT Corporation Limited. He is also a Board Member of the Agency for Integrated Care Pte Ltd; a member of the Advisory Board to the joint IATA-NTU Advanced Management Program (AMP) and its Executive MBA degree in Aviation Management; a Board Member on the Airports Council International (ACI) World Governing Board, as well as First Vice President of the ACI Asia-Pacific Regional Board.

Prior to the corporatisation of CAG, Mr Lee was Deputy Director-General (Operations) of the Civil Aviation Authority of Singapore. From 2005 to 2008, he was the Principal Private Secretary to the late Minister Mentor Lee Kuan Yew in the Prime Minister's Office. From 1989 to 2005, Mr Lee held various appointments in the Republic of Singapore Air Force (RSAF) and the Ministry of Defence. His last military appointment was Deputy Head of Air Operations in HO RSAF.

Mr Lee was awarded the President's Scholarship and the SAF (Overseas) Scholarship in 1989 and the SAF Postgraduate Scholarship (General Development) in 2002. He holds a Bachelor in Business Administration (Honours) from the University of Cambridge, UK, and a Master in Business Administration from the Massachusetts Institute of Technology, US.







#### 3. LIM Soo Hoon

Ms Lim is a Non-Executive Director of CAG and was appointed to the Board on 16 June 2012.

She was appointed Permanent Secretary (Finance) (Performance) at the Ministry of Finance on 1 April 2012. She is also the Chairman of the Accounting & Corporate Regulatory Authority (ACRA).

In her capacity as Permanent Secretary (Finance) (Performance), she oversees the Ministry's central role in creating a high performance government through efficient and effective use of resources, and working towards an integrated government through synergies in programmes, processes and systems across the various government agencies.

Ms Lim joined the Administrative Service in 1981 after graduating with a Bachelor of Economics (Honours) from the University of Adelaide on a Colombo Plan Scholarship. She also holds a Master in Public Administration from Harvard University.

She has served in various portfolios in the Singapore Civil Service, including the Ministry of Trade and Industry, the former Ministries of Communications and Labour, as well as the Registry of Vehicles. She was appointed Permanent Secretary (Community Development) in 1999 and became Permanent Secretary (Public Service Division) in 2005 before joining the Ministry of Finance in 2012.

### 4. Derrick WAN Yew Meng

Mr Wan is Alternate Director to Ms Lim Soo Hoon and was appointed to the Board on 16 June 2009.

Mr Wan is Director (Reserves and Investment) at the Ministry of Finance. Prior to joining the Ministry of Finance in November 2008, he was Director (Investments and Projects) at the Central Provident Fund and has held appointments in the Ministries of Manpower, Law and Defence.

Mr Wan is a Chartered Financial Analyst (CFA), a Chartered Alternative Investments Analyst (CAIA) charter holder and a Professional Risk Manager (PRM). He was awarded the Overseas Merit Scholarship to study at the University of York, England, where he graduated with First Class Honours (with Distinction) in Economics and Econometrics. He also holds a Master in Financial Engineering from NUS and a Master in Business Administration from Columbia University, New York.

# 5. Michael George William BARCLAY

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

Mr Barclay is Group CEO of Mandai Park Holdings Pte. Ltd., which oversees Wildlife Reserves Singapore and Mandai Park Development.

Prior to joining Mandai Park
Holdings, 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 has completed the Advanced Management Programme at Harvard Business School.







### 6. Miguel KO Kai Kwun

Mr Ko is a Non-Executive Director of CAG and was appointed to the Board on 7 September 2009.

Mr Ko is currently the Executive Director and Group CEO of Ascendas-Singbridge. Previously, Mr Ko was Chairman and President of Starwood Hotels & Resorts, Asia Pacific Division. Prior to his appointment, Mr Ko was Deputy Chairman and CEO of CDL Hotels International.

Widely recognised for his knowledge and insight of business and culture in the Asia Pacific tourism industry, Mr Ko was voted Regional Hotel Chief of the Year (2007 & 2008) by readers of the Travel Weekly. He was named Visionary Leader of the Year and was a recipient of the Global Awards at the World Travel Mart (2007) in London. He was also honoured the Lifetime Achievement Award 2012 at the China Hotel Investment Conference in Shanghai.

Mr Ko has a Bachelor in Business Administration in Economics from the University of Massachusetts and a Masters in Business Administration from Suffolk University. He is also a non-participating Certified Public Accountant (CPA) by the State Board of Accountancy in New Hampshire in the US.

#### 7. Eric ANG Teik Lim

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

Mr Ang is currently Senior Executive Advisor at DBS Bank and is principally responsible for business origination and high level relationship building for the bank. He previously served as Head of Capital Markets at DBS Bank and worked on many landmark deals including the initial public offerings of Singapore Airlines, Singapore Telecoms and CapitaMall Trust.

Mr Ang sits on the Boards of Raffles Medical Group Ltd, Sembcorp Marine Ltd, Surbana Jurong Private Limited, DBS Foundation and Hwang Capital (Malaysia) Bhd. He is also the Co-Chairman of the SGX Disciplinary Committee and one of the Vice-Chairmen of Community Chest in Singapore.

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

# 8. Dilhan Pillay SANDRASEGARA

Mr Sandrasegara is a Non-Executive Director of CAG and was appointed to the Board on 15 January 2010.

He is the President, Joint Head of the Enterprise Development Group, Investment Group and Singapore, Joint Head, Americas, of Temasek International Pte Ltd. Prior to joining Temasek, Mr Sandrasegara was the Managing Partner of Singapore law firm WongPartnership LLP. He has over 20 years of experience in the legal industry with his main focus of practice in mergers and acquisitions, corporate governance and general corporate law.

Mr Sandrasegara serves on the boards of the Singapore Management University, Singapore Institute of Legal Education, Temasek Life Sciences Ventures Pte Ltd, Fullerton Financial Holdings Pte Ltd, the National Research Foundation in Singapore, Mandai Safari Park Holdings Pte Ltd, Vertex Venture Holdings Ltd and Ascendas-Singbridge Pte. Ltd. He is also a member of the Financial Centre Advisory Panel of the Monetary Authority of Singapore and a member of the Committee on the Future Economy.

He graduated from NUS with a Bachelor of Laws and obtained a Master of Law from the University of Cambridge.







### 9. Danny TEOH Leong Kay

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

Mr Teoh is a Board Member of Ascendas-Singbridge Pte Ltd, DBS Ltd, DBS Bank Holdings, DBS Bank (China) Ltd, DBS Foundation Ltd, JTC Corporation 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 is currently a fellow of the Institute of Singapore Chartered Accountant. In his current appointment as an independent Director of various boards, he also serves as the Chairman of the Audit Committee and Board Risk Committee.

#### 10. Richard Rokmat MAGNUS

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

Mr Magnus is currently Chairman of the Public Transport Council, Public Guardian Board, Political Films Advisory Committee, Bioethics Advisory Committee, Ministry of Home Affairs' Remote Gambling Act Appeals Advisory Panel and is a Member of the Public Service Commission and the Ministry of Home Affairs' Independent Review Panel. In the private sector, Mr Magnus serves on the boards of Temasek Cares CLG Limited, CapitaLand Mall Trust Management Ltd, Singapore Consortium Investment Management Limited, and is Chairman of the Management Board of 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, the first Chairman of the Casino Regulatory Authority, and an Expert Member on UNESCO's International Bioethics Committee, as well as an alumnus of the National Agenda Council of the World Economic Forum.

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

Mr Magnus graduated from NUS with a Master of Laws. He is also an alumnus of the Harvard Business School and the John F Kennedy School of Government.

### 11. Professor TAN Kong Yam

Professor Tan is a Non-Executive Director of CAG and 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 NUS. He is also Deputy Chairman of APS Asset Management (China) and sits on the boards of Surbana-Jurong, Ascendas-Singbridge 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 11th five-year plan (2006-2010) 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 (1999-2002) 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.

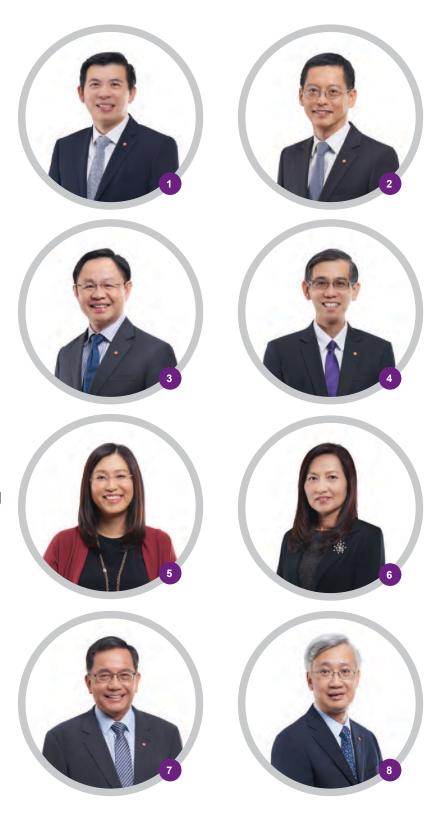
## **EXECUTIVE MANAGEMENT**

## **Changi Airport Group**

- **1. LEE Seow Hiang**Chief Executive Officer
- 2. TAN Lye Teck
  Executive Vice President,
  Airport Management
- 3. YAM Kum Weng
  Executive Vice President,
  Air Hub & Development
- **4. FOO Sek Min**Executive Vice President,
  Corporate
- 5. LIM Peck Hoon Executive Vice President, Commercial
- **6. NG Lai Leng**Chief Financial Officer
- 7. FONG Kok Wai
  Executive Vice President,
  Engineering & Development

### **Changi Airports International**

**8. LIM Liang Song**Chief Executive Officer



## MANAGEMENT TEAM

### **Changi Airport Group**

**CHOY Da Wen** 

Senior Vice President, Changi East Programme Management Office

**CHUNG Choon San** 

Project Director, Changi East Construction

**Jayson GOH** 

Senior Vice President, Airport Operations Management

**HUNG Jean** 

Senior Vice President, Landside Concessions

**KOH Ming Sue** 

Senior Vice President, Master Planning & Development

**LECK Siew Leng** 

Senior Vice President, Internal Audit

**Audrey LEE** 

Senior Vice President, Economic Affairs

**Steve LEE** 

Senior Vice President, Corporate IT & Technology/ Chief Information Officer **LEONG How Yin** 

Project Director, Changi East Planning, Design & Construction

**LEONG Kok Hoong** 

Senior Vice President, Development Contracts & Cost Control

**LIM Ching Kiat** 

Senior Vice President, Market Development

LIM Wee Ping

Senior Vice President, Corporate Strategy & Business Development

**LING Ming Koon** 

Senior Vice President, T1 Expansion Programme Management Office

Jessie LOONG

Senior Vice President, Legal/ Company Secretary

**ONG Chee Chiau** 

Senior Vice President, Changi East T5 Planning

**ONG Sim Lian** 

Senior Vice President, Design Management **Cletus PACKIAM** 

Chief,

Airport Emergency Service

**Ivan TAN** 

Senior Vice President, Corporate & Marketing Communications

**Justina TAN** 

Senior Vice President, People

**TAN Kok Siong** 

Project Director, Changi East Construction

**TENG Hwee Onn** 

Senior Vice President, Engineering Management & Systems Planning

**TEO Chew Hoon** 

Senior Vice President, Airside Concessions

**Ivy WONG** 

Senior Vice President, Finance Strategy & Transformation

**YEO Kia Thve** 

Senior Vice President, Airport Operations Planning & Airside

**Changi Airports International** 

(Members of Changi Airports International's Management Committee)

**CHAN Mew Yoong** 

Director and Head, Human Resources

**Eugene GAN** 

Managing Director, Asset Management

**Peter LEE** 

Managing Director, Changi Airport Planners & Engineers **LOW Beng Lan** 

**Chief Financial Officer** 

**NG Kuan Luen** 

Director and Head, Risk Management

Jose PANTANGCO

Managing Director, Business Development **SEE Ngee Muoy** 

Managing Director, Legal & Compliance

**James THONG** 

Managing Director, Consultancy

## **AWARDS**

## ACCOLADES RECEIVED BY CHANGI AIRPORT (FY2015/16)

## 2016

монтн	AWARDS	PUBLICATION/ORGANISATION	NO. OF TIMES
Mar	World's Best Airport 2016	Skytrax	7
Feb	Asia's Top Airport	Finance Asia	3
	Best Airport	DestinAsian	11
	Top Worldwide Airport	Wanderlust	14
	Best Airport by Size (over 40mil)	Airports Council International	4
	Best Airport by Region (Asia-Pacific)	Airports Council International	2
Jan	Deficiency-Free	International Federation of Airline Pilots Associations (IFALPA)	35

## 2015

MONTH	AWARDS	PUBLICATION/ORGANISATION	NO. OF TIMES
	Best Airport in the World	Business Traveler, US	23
Dec	Best International Airport	Condé Nast Traveller, US	8
	World's Leading Airport	Business Traveler, US Condé Nast Traveller, US World Travel Awards Selling Travel Business Traveller, China Condé Nast Traveller, India Travel Trade Gazette, Asia Business Traveller, UK World Travel Awards Travel Weekly Asia UltraTravel, US Condé Nast Traveller, UK Business Traveller, Asia Pacific Business Traveller, Asia Pacific Frequent Business Traveler Smart Travel Asia Business Traveller, Germany Travel + Leisure Asia Cargo News Business Traveller, Middle East TravelWeekly China UltraTravel	10
	Overseas Airport	Selling Travel	12
Nov	Best Airport in the World	Business Traveller, China	11
	Best Airport	Condé Nast Traveller, India	5
	Hall of Fame – Best Airport	Travel Trade Gazette, Asia	13
	Best Airport in the World	Business Traveller, UK	28
Oct	Asia's Leading Airport	World Travel Awards	12
	Best Airport	Travel Weekly Asia	Inaugural
	Best Airport in the World	UltraTravel, US Condé Nast Traveller, UK	Inaugural
	Best Airport in the World	Condé Nast Traveller, UK	10
Sep	Best Airport in the World	Business Traveller, Asia Pacific	24
	Best Airport in Asia Pacific	Asia Pacific Business Traveller, Asia Pacific	6
A	Best Airport in Asia Pacific	Frequent Business Traveler	3
Aug	Best Airport Worldwide	Condé Nast Traveller, US World Travel Awards Selling Travel Business Traveller, China Condé Nast Traveller, India Travel Trade Gazette, Asia Business Traveller, UK World Travel Awards Travel Weekly Asia UltraTravel, US Condé Nast Traveller, UK Business Traveller, Asia Pacific Business Traveller, Asia Pacific Frequent Business Traveler Smart Travel Asia Business Traveller, Germany Travel + Leisure Asia Cargo News Business Traveller, Middle East TravelWeekly China UltraTravel	7
Jul	Best Business Airport	Business Traveller, Germany	22
Jui	Best International Airport in the World	Business Traveller, China Condé Nast Traveller, India Travel Trade Gazette, Asia Business Traveller, UK World Travel Awards Travel Weekly Asia UltraTravel, US Condé Nast Traveller, UK Business Traveller, Asia Pacific Business Traveller, Asia Pacific Frequent Business Traveler Smart Travel Asia Business Traveller, Germany Travel + Leisure Asia Cargo News Business Traveller, Middle East TravelWeekly China UltraTravel  Duty Free News International & Travel Retailer International	3
Jun	Best Green Airport	Asia Cargo News	4
	Best Airport in the World	Business Traveller, Middle East	12
	Best International Airport of the Year	TravelWeekly China	8
May	Best Airport in the World	UltraTravel	9
	Airport Authority in Asia/Pacific with the Most Supportive Approach to Travel Retail	Duty Free News International & Travel Retailer International	15
Apr	Best Airport (World)	Travel + Leisure, India and South Asia	4



## FINANCIAL REVIEW

## **Financial Highlights**

	FY11/12	FY12/13	FY13/14	FY14/15	FY15/16
Profit & Loss (S\$'mil)					
Total revenue	1,779	1,911	2,106	2,150	2,164
Total expenses	1,119	1,149	1,185	1,255	1,284
EBITDA	930	1,045	1,187	1,171	1,167
Profit after tax	553	751*	896*	782	784
Financial Position (S\$'mil)					
Assets	5,144	5,880	6,684	7,564	8,460
Liabilities	754	768	937	1,441	1,874
Equity	4,390	5,112	5,747	6,123	6,586
Financial Ratios					
EBITDA margin	52.3%	54.7%	56.3%	54.5%	53.9%
NPAT margin	31.1%	39.3%	42.5%	36.4%	36.2%
Return on assets	11.6%	13.6%	14.3%	11.0%	9.8%
Return on equity	13.4%	15.8%	16.5%	13.2%	12.3%

<sup>\*</sup> NPAT included one-off gains of S\$78 million and S\$111 million for FY12/13 and FY13/14 respectively.

### The year in review

Growth in passenger traffic for the first half of FY2015/16 was fairly slow but picked up strongly in the second half. For the full year, growth was 5.1%, reaching 56.7 million. The uplift in passenger traffic was in part due to airlines injecting capacity on the back of lower fuel prices, and in part due to CAG's successful joint marketing efforts with airlines to drive passenger traffic. Through dedicated marketing efforts and strategic partnerships with the aviation community, we continued to grow Changi's connectivity with the addition of eight new airlines and eight new city links.

Operating revenue grew by 0.7% to reach \$\$2.2 billion. During the year, CAG continued to extend cost relief measures to the aviation community by providing rebates to airline and cargo partners to help them tide over challenging business conditions. Operating revenue was strongly boosted by concession sales which grew by 9.9%. Concession sales reached a record high of more than \$\$2.2 billion arising from higher passenger traffic and the introduction of innovative retail concepts, new services and refreshed offerings to attract visitors and shoppers from all over the world.

On the cost front, operating expenses increased 2.3% year-on-year to S\$1.3 billion. This largely arose from escalating manpower costs for our labour-intensive contracts as a result of structural wage reforms and manpower shortage in Singapore. In addition, CAG also continued to invest in service improvements and more manpower to support ongoing development projects.

Earnings before interest, tax, depreciation and amortisation (EBITDA) of S\$1.2 billion remained comparable against the previous year despite the cost relief measures provided to airlines. The Group achieved a net profit after tax (NPAT) of S\$784 million, similar to that for FY2014/15.

### Operating revenue

The Group's operating revenue grew by 0.7% to \$\$2.2 billion. Airport services declined by 8.7% due to a decline in aeronautical revenue as the Group extended more support to airlines, cargo agents and ground handling agents in the form of price reductions, rebates and incentives. Transfer and transit passenger charges were



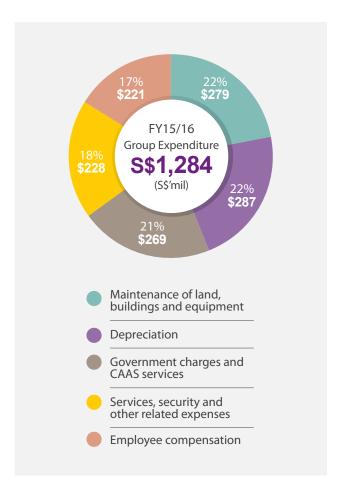
also reduced. These measures provided cost relief to our airport partners and encouraged growth by promoting more long-haul flights and the use of bigger aircraft.

The decline in aeronautical revenue was partially mitigated by higher passenger growth in the second half of the year. Traffic to most regions grew with Northeast Asia and Southeast Asia registering the strongest traffic growth of 7.1% and 5.3% respectively. Eight new airlines and eight new city links were added to enhance Changi Airport's connectivity and strengthen Singapore's position as the leading air hub for the region. CAG collaborated with airlines, travel agents and tourism organisations to grow traffic and promote travel via Changi. Direct marketing efforts using digital and mobile channels were also rolled out in key markets.

We achieved strong growth in airport concession and rental income which grew 7.2% year-on-year to reach \$\$1.1 billion. The growth in concession income came on the back of strong retail sales which grew by 9.9% to reach a record high of more than \$\$2.2 billion. This placed Changi Airport as one of the top three airports in the world for concession sales. Growth of passenger traffic of 5.1%, strong marketing and promotional campaigns, as well as new and refreshed retail

offerings helped to boost retail sales. During the year, CAG continued to roll out innovative retail concepts such as the opening of duplex stores by Spanish label Zara and The Shilla Beauty Loft. Strong profit from Changi Airport's non-aeronautical business enables CAG to subsidise and keep aeronautical charges competitive.

### Operating expenses



The Group's operating expenses increased moderately by 2.3% to \$\$1.3 billion. The increase came from maintenance, services and security-related expenses, employee compensation, as well as depreciation.

Sustained cost pressures from wage reforms and the tight labour situation in Singapore continued to add pressure on CAG's manpower-intensive services, including cleaning, maintenance of structures and specialised equipment, and security services. We also stepped up screening at various check points to enhance security of the airport. In addition, we invested more into service improvements such as extending the shopping concierge service to T1 and T3 and intensifying our quality service management

programmes to drive service excellence at Changi Airport. With the development of T4, Jewel, T1 Expansion as well as Changi East, higher manpower and expenses were also incurred to support these development projects. The increase in operating expenses was mitigated by lower charges for CAAS services and a reduction in electricity cost with the drop in oil prices.

### EBITDA/Profit After Tax

The Group achieved an EBITDA of S\$1.2 billion and NPAT of S\$784 million which were comparable with the last financial year.

Included in the NPAT is the Group's share of results of its overseas airport investments in Russia, Brazil, and India. While the deterioration of Brazil's economic and political environment had impacted businesses, the Group has assessed that the long-term fundamentals of its investment remain positive and that there is no material impact on its financial result for FY2015/16.

### Strong financial position

The Group's shareholder's equity improved by S\$463 million to reach S\$6.6 billion with a strong asset base of S\$8.5 billion. During the year, a sinking fund reserve of S\$85 million, apportioned out of CAG's retained earnings, was set aside to fund the Changi East development project.

Total assets increased S\$897 million to S\$8.5 billion. The increase comprised mainly investments in development projects as we embarked on capacity building. The major components of total assets were property, plant and equipment (of S\$3.9 billion) and cash and cash equivalents (of S\$3.3 billion). The surplus cash has been earmarked for the funding of ongoing development projects.

### Capital expenditure

The Group's strong financial position enables it to invest in capital expenditure to upkeep and enhance the airport's facilities as well as fund several significant development projects (which include T4, Jewel, T1 Expansion and the three-runway system) to meet long-term capacity needs of Changi Airport. The total cost of these capital investments is estimated to be close to S\$10 billion over the next five years. The development projects are progressing well, with T4 on track to be operational in the second half of 2017.

## CORPORATE GOVERNANCE

The Board and Management of CAG are deeply committed to our Company's central 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 stakeholders can be proud of. To operate a sustainable business that thrives over the long term, and to uphold and protect the Company's brand and reputation, CAG strongly believes that it has to be accountable to its immediate business and regulatory environment, as well as to the global community.

CAG has a Code of Conduct, which 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 implemented a whistle-blowing framework to prevent, detect and deter unethical or illegal conduct or behaviour, while protecting whistle-blowers from retaliation.

#### THE BOARD OF DIRECTORS

 CAG's Board of Directors is our highest decisionmaking body, which oversees the Company's longterm strategies and provides management guidance for continuing and steady growth, while protecting the interests of stakeholders.

### Composition and Balance

- The Board, headed by non-executive Chairman, Mr Liew Mun Leong, comprises 10 Directors, of whom only the CEO, Mr Lee Seow Hiang, is an executive Director. The majority of our Board members are independent. Our Directors are individuals with broad and diverse expertise and experience, both domestically and internationally.
- 3. The Board Directors of CAG are:

Mr Liew Mun Leong – Chairman
Mr Lee Seow Hiang – CEO
Ms Lim Soo Hoon – Shareholder Representative
Mr Derrick Wan Yew Meng
(Alternate Director to Ms Lim Soo Hoon)
Mr Michael George William Barclay
Mr Miguel Ko Kai Kwun
Mr Eric Ang Teik Lim
Mr Dilhan Pillay Sandrasegara
Mr Danny Teoh Leong Kay
Mr Richard R. Magnus
Professor Tan Yong Kam

The profiles of the Directors can be found on pages 20 to 23 in this annual report. Changi Airports International (CAI), a wholly-owned subsidiary, 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 the Company's businesses and implementation of the Group's strategies and policies.
- 5. Six 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) and Operational Risk and Safety Committee (ORSC). Each committee is governed by its own terms of reference, which sets out the scope of the committee's duties and responsibilities. Ad hoc committees are also formed to review specific issues from time to time.
- The Board meets at least four times a year to review CAG's business performance and financial results, and to approve the annual budget.

### 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 as well as legislative, industry and other significant developments relating to the Group – which enables 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 AND INVESTMENTS**

1. The members of the EXCO are:

Mr Liew Mun Leong – Chairman Ms Lim Soo Hoon Mr Eric Ang Teik Lim Mr Richard R. Magnus Mr Lee Seow Hiang

 The EXCO reviews and recommends to the Board financing and investment strategies of the Company 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.

### **EXECUTIVE RESOURCE AND COMPENSATION**

 The ERCC comprises the following non-executive Directors:

> Mr Liew Mun Leong – Chairman Mr Eric Ang Teik Lim Mr Miguel Ko Kai Kwun

- 2. The ERCC supports and advises the Board on remuneration matters, leadership succession and development. The roles of the ERCC include:
  - reviewing and approving the policy for determining executive remuneration, including the remuneration packages, service contract terms and benefits programme for key management executives;
  - 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

 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 Ms Lim Soo Hoon Mr Eric Ang Teik Lim

3. The primary role of the AC is to assist the Board to review the adequacy of CAG'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 CAG's employees, partners, suppliers and contractors to raise concerns in confidence and the procedures for independent investigation of the matters reported, and ensures appropriate follow-up, investigation and resolution.

- 4. During the year, the AC performed an independent review of the financial statements of the Company. In the process, the AC reviewed 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. Annually, the AC reviews and approves the audit plans of the internal auditors to ensure the adequacy of the audit scope in reviewing CAG's significant internal controls. Besides reviewing the adequacy of the internal audit function in terms of its resources, competency and standing within the organisation, the AC is also updated on the training received by the internal audit team to ensure that its staff continually updates their technical and auditing skills. The AC also reviews the reports of the external and internal auditors on the effectiveness of actions taken by Management on the auditors' recommendations and observations.
- 6. The AC reviews and approves the external auditor's audit plan for the year. 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 guidelines established by the Accounting and Corporate Regulatory Authority and through discussions with the external auditors. 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.

### **INTERNAL CONTROLS**

- 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 shareholders' 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 CAG are supported by systems, processes and people. There are three elements to the internal controls:
  - a. business governance and policies to provide direction and guidance on financial, operational, information technology and compliance matters;
  - the management and assurance frameworks such as the enterprise risk management and fraud risk management processes. These processes include the conflict of interest declarations by employees under the Code of Conduct to establish expectations of employees' business conduct, the Whistleblowing Policy; and
  - c. independent assurance provided by the internal and external auditors.
- 3. CAG's internal and external auditors review the key internal controls of the Company for material non-compliance or failures in internal controls, and recommend areas of improvements. The AC reviews the effectiveness of the action taken by Management on 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. A separate committee, the Tenders Committee (TC), evaluates and approves tenders for goods and services exceeding \$\$50 million, 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

- 6. The role of the internal auditors is to assist the AC to ensure that the Company maintains a sound system of internal controls. Internal Audit (IA) 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.
- 7. 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.
- 8. Audits are carried out on all significant business units and processes in the Company. The annual audit plan is developed in consultation with, but independent of, Management and is approved by the AC. IA report on findings and recommendations are submitted to the AC with copies extended to the CEO and relevant senior management officers, and a summary of key findings and recommendations 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 timely and adequate closure of audit findings.

### AIRPORT DEVELOPMENT

1. The ECAD comprises three Directors. The three Directors are:

Mr Liew Mun Leong – Chairman Mr Derrick Wan Yew Meng Mr Lee Seow Hiang

As and when necessary, external members may be co-opted to provide expertise in relation to the development projects.

- 2. The ECAD oversees new development projects 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 \$\$50 million related to the development projects at Changi Airport.

## ENTERPRISE RISK MANAGEMENT

- CAG is fully committed in implementing a robust enterprise risk management framework which covers operational & safety, regulatory, financial, and key project management risks arising from the T4, Jewel, T1 Expansion, and Changi East developments.
- 2. The risk owners in the key operational divisions work closely with the Enterprise Risk Management (ERM) unit to increase vigilance through the timely identification of key risks so that mitigating controls can be quickly put in place. Each key developmental project also has a dedicated risk manager, whose role is to aggregate the project's critical and emerging risks which impact timelines, costs, quality and safety at the enterprise level.
- By effectively managing risks, CAG ensures a safe, secure and seamless airport experience for its customers, while ensuring continued growth of the air hub and timely delivery of key developmental projects of good quality, that are within approved costs.

### Risk Governance

 The CAG Risk Committee, supported by the ERM unit, leads the Company's efforts in developing and strengthening its risk management processes and framework.

- The ORSC comprises two Directors. The two directors are:
  - Mr Michael George William Barclay Chairman Mr Richard R. Magnus
  - An external member (not being a director) may be co-opted as and when necessary to provide expertise in the areas reviewed.
- Both the Board and Management are responsible for managing risks and safety. The ORSC assists the Board in exercising this role by reviewing CAG's operational risk management process (including risk assessment, mitigation, monitoring and review), and CAG's safety management system.
- Reporting to both the AC and ORSC, the Risk Committee is chaired by the CEO and comprises Senior Management members, who meet regularly to review CAG's key risks and provide directions to strengthen the implementation of ERM in CAG.

### Risk Awareness Culture

- 8. At CAG, every employee and everyone working in the airport community is a valued manager of risks. Therefore, the Risk Committee, through the ERM unit, continues with its engagement efforts through inter-divisional risk workshops and meetings with risk owners.
- CAG also engages its airport partners through both formal meetings and informal channels on risk issues so that there is greater sharing and deeper understanding of risk-related issues.

# **BUSINESS & OPERATIONS REVIEW**



















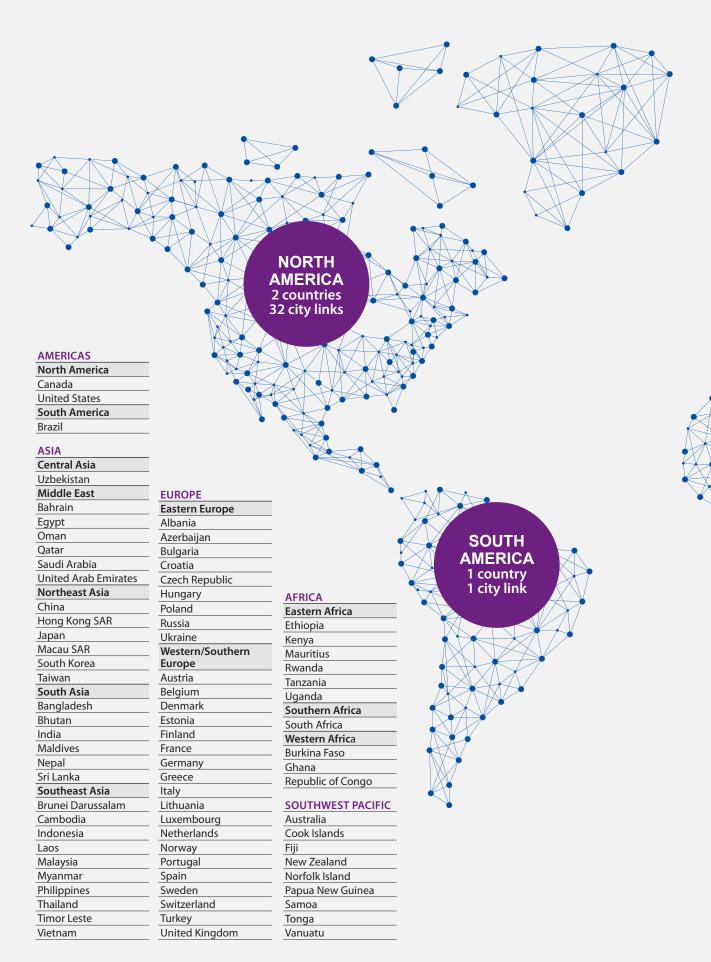








### **GLOBAL CONNECTIVITY**





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

### AIR TRAFFIC STATISTICS

# PASSENGER MOVEMENTS



FY15/16	56,737,315
FY14/15	53,969,875
FY13/14	53,874,049
FY12/13	51,940,972
FY11/12	47,950,582
FY10/11	42,983,369

### AIRFREIGHT MOVEMENTS (TONNES OF AIRFREIGHT)



FY15/16		1,867,784
FY14/15	1,847,423	
FY13/14	1,837,580	
FY12/13	1,832,144	
FY11/12		1,867,748
FY10/11	1,826,381	

# COMMERCIAL AIRCRAFT MOVEMENTS



FY15/16	351,059
FY14/15	339,191
FY13/14	347,458
FY12/13	327,819
FY11/12	310,763
FY10/11	271,286

# @CHANGIAIRPORT ON Instagram































### A LEADING AVIATION HUB



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

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

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

Passenger traffic to all regions grew, with the exception of Africa.

Northeast Asia and Southeast Asia registered the strongest traffic growth of 7.1% and 5.3% respectively.

Indonesia continued to rank as Changi Airport's largest country market, followed by Malaysia, Thailand, Australia and China. In particular, China (+11%) and Thailand (+11%) showed strong growth over the course of the year. In terms of the top cities, Bangkok overtook Jakarta to claim the top spot, registering the strongest growth (+13%). Jakarta and Kuala Lumpur were second and third respectively.

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

#### Embracing new opportunities

Together with its airline partners, CAG took strategic steps to enhance Changi Airport's connectivity and strengthen Singapore's position as the leading air hub for the region.

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

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

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

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

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

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

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

### Strengthening Changi's attractiveness

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

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

#### Growing new traffic segments

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

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



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

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

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

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

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

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

#### Promoting to key markets

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

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

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

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

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

# Boosting Changi's air cargo capabilities

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

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



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



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

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

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

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

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

Besides extending support, CAG also collaborated with its partners – Alliance 21, dnata Singapore, SATS and Singapore Airlines Cargo – to exhibit at the 2015 Air Cargo Europe & Transport Logistics in Munich. The world's largest trade fair for logistics, mobility, IT and supply chain management, this was a valuable platform for CAG and its partners to promote Singapore as a reliable and trusted air cargo hub.

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

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

### A FIRST-CLASS CHANGI EXPERIENCE



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

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

#### A year of celebrations

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

Changi remains the world's most awarded airport, receiving its 500<sup>th</sup> Best Airport award in November 2015. To mark the major milestone and as an appreciation to passengers and the airport community for their unwavering support over the years, leaders from CAG and various airport agencies came together on 24 and 25 November 2015 to serve complimentary fresh coffee brews in the three terminals. The celebration was well received and some 10,000 cups of coffee were served to passengers and staff over the two days.

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

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

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

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

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

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

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

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

To deepen the relationship with our passengers, Changi Airport unveiled a series of WOW initiatives in January 2016, providing another layer of positively surprising experiences for those travelling through Changi. With activities such as photo taking with the airport's mascot Max, screening of live football matches, storytelling for kids, and origami folding sessions, this was an initiative to provide something for everyone to look forward to during their time at Changi.

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



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



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

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

# Driving efficiency & productivity

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

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

#### Fast and Seamless Travel (FAST)

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

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

The FAST programme at Changi Airport has been implemented in phases, with Singapore Airlines, SilkAir, Cathay Pacific, AirAsia and Qantas among the airlines coming on board the FAST programme during the past year alone. As an example, CAG partnered Singapore Airlines and its regional wing, SilkAir, to roll out 24 FAST check-in kiosks in T2 and another 24 kiosks in T3. Over the past few years, 16 airlines have adopted at least one of the FAST initiatives to date. Collectively, these airlines account for about 70% of passengers departing from Changi Airport and CAG will continue to work closely with airlines to grow the adoption of FAST.

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

#### Common early check-in

Another productivity initiative that was rolled out over the past year

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

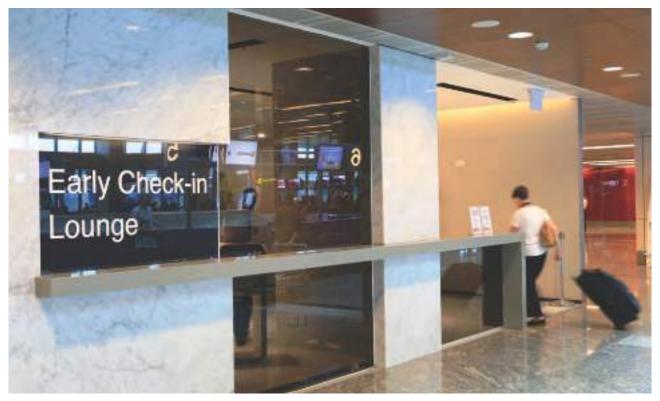
Prior to the common early check-in initiative, airlines offered early check-in services independently and this proved to be both cost-and labour-inefficient. By pooling together space and manpower resources under the common early check-in initiative, airlines can now offer all-day early check-in for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

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

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



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



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

#### Automated Trolley Management System (ATMS)

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

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

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

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

#### Fostering a ONE Changi culture

As CAG continues to roll out enhancements to improve the

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

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

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

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

#### Seletar Airport

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

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

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



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



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

#### Food waste recycling

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

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

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

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

### STEPPING UP THE IT GAME



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

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

# Enhanced platforms for operations

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

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

Two business intelligence (BI) projects aimed at boosting the airport's efficiency and productivity were launched during the year. The first customer insight-led BI initiative involved a transformation of the airport community's data collection and analysis processes. By integrating diverse data from six ground surveys into a common platform, the new model reduced processing time by over 65%, enhancing the availability and quality of service performancerelated insights. The faster and deeper cross analysis across various touchpoints also allows operations as well as management staff to better understand and improve the ground situation, which in turn helps uphold the high service quality standards at Changi Airport.

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

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

#### A facelift for ChangiAirport.com

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

### **ENGINEERING FOR GROWTH**



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

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

#### Airport capacity enhancement

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

# New infrastructure development

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

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

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

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

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

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

#### Safety focus

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

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

#### Sustainability drive

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

### **ENSURING SAFETY & SECURITY**



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

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

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

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

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

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

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

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

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

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

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

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

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

### THE BEST IN SHOPPING & DINING



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

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

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

# New services and refreshed offerings

With 360 retail and services outlets and 140 dining outlets over 76,000 square metres of retail space, passengers at Changi Airport are spoilt for choice. During the year, one of Changi's core concessions – Cosmetics and Perfumes – welcomed the opening of its beauty duplex at T3. Named The Shilla Beauty Loft, passengers can pamper themselves with facial spas, makeovers and beauty consultations from renowned brands such as Chanel, Dior, La Prairie and SK-II.

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

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

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

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



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

#### A 'WOW' shopping experience

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

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

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

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

#### Expanded online footprint

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

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

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

#### A vibrant retail destination

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

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

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



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

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

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

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

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



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

#### THE BEST IN SHOPPING & DINING



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

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

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

To reward Changi's loyal fans, the Changi Rewards loyalty programme gives members 7% GST savings when they shop or dine in the public areas. The membership base grew 50% over the year to more than 300,000 members.

#### Rentable properties

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

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

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

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



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

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

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

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

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

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



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

#### **Dior Delights**

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

And that is not all. One of Dior's beauty consultants is multilingual Ken Alcindor from France (see page 7). Passengers whom Ken has served have been pleasantly surprised that he can converse fluently in French, Spanish and even Mandarin. His excellent command of the different languages has allowed him to interact more meaningfully with customers.

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

### **UPCOMING DEVELOPMENTS**



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

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

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

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

# PREPARATIONS FOR T4 OPENING

Since its groundbreaking in November 2013, the development of Changi Airport's new T4 has made good progress, with construction to be completed by the end of 2016. It is on track to be operational in the second half of 2017. The main contractor, Takenaka Corporation, has achieved a clean construction record of 11.5 million accident-free man-hours.

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

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

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

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

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

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

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

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

On the commercial front, leasing of the more than 80 retail spaces at the new terminal has also made good progress. Concessions in key retail zones which include the doublevolume façade shops and heritage zone have already been taken up, with the leasing of the remaining retail spaces expected to be completed by the end of 2016. The heritage zone will showcase retail and F&B brands with a local flavour, with its design paying homage to Singapore's unique cultural heritage while giving first-time visitors a

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



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

#### Launch of T4 pedestrian bridge

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

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

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

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

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



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

## PROGRESS WITH JEWEL AND T1 EXPANSION

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

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

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

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

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

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

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

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

# NEXT PHASE OF GROWTH FOR CHANGI EAST

Akin to building a new airport, the Changi East development is a longer-term infrastructure project which represents the next major phase of growth for Changi Airport. The 1,080-hectare site will include the future Changi Airport T5, a third runway, as well as aviation facilities, tunnel systems, related infrastructure and transport links.

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

# Three-runway system by early 2020s

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

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

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

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

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

#### Safety first

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

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

#### Conceptual design of T5

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

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



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

### INTERNATIONAL PRESENCE



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

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

#### **INVESTMENTS**

#### Brazil

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

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

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

Cargo operations improved. The airport became the first in Latin America to participate in the International Air Transport Association's global certification programme for pharmaceutical products.

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

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

#### India

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

The city's airport, Kazi Nazrul Islam Airport, received its operating licence in May 2015. India's national carrier, Air India, launched a sixtimes-weekly Durgapur-Kolkata service in the same month. The flight was extended to the capital in December 2015 with a thrice-weekly Kolkata-Durgapur-Delhi service.

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

#### Russia

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

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

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

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

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

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

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

#### **CONSULTANCY**

#### Saudi Arabia

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

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

double the volume since the start of the CAI partnership.

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

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

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

#### China

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

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

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

#### **Thailand**

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

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



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

### **BUILDING 'HEARTWARE'**



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

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

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

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

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

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

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

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

#### Supercharging Terminal 'H'

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

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

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

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



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

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

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



#### **Keeping In. Touch**

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

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

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

### **COMMUNITY & SUSTAINABILITY**



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

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

#### Community outreach

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

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

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

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

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

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

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

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

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

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

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

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

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

#### Sustainability efforts

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

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

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

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

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

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

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



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

### FNGAGING FANS AROUND THE WORLD



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

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

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

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

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

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

## Social media awards won in FY2015/16



# 'Best Use of Digital Media' (Gold)

HumanResources Asia Recruitment Awards 2016



# 'Best Use of Social Media' (Silver)

PRWeek Awards Asia 2016



# 'Best Use of Social Media' (Silver)

PR Awards 2016



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

PR Awards 2016



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



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



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



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



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



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

#### **GROUP FINANCIAL SUMMARY**

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The Group Financial Summary as set out on pages 71 to 80 contains only a summary of the information extracted from the Directors' Report, 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 2016.

For a full understanding of the state of affairs of the Company and the Group as at 31 March 2016 and of the results of the Group for the financial year ended 31 March 2016, 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.changiairport.com).

#### **DIRECTORS' STATEMENT**

For the financial year ended 31 March 2016

The directors present their statement to the member together with the audited financial statements of the Group for the financial year ended 31 March 2016 and the balance sheet of the Company as at 31 March 2016.

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 74 to 78 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 2016 and the financial performance, changes in equity and cash flows of 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 Miguel Ko Kai Kwun
Ms Lim Soo Hoon
Mr Richard R. Magnus
Mr Dilhan Pillay Sandrasegara
Mr Tan Kong Yam
Mr Danny Teoh Leong Kay
Mr Derrick Wan Yew Meng (alternate director to Ms Lim Soo Hoon)
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.

#### **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.

### **DIRECTORS' STATEMENT**

For the financial year ended 31 March 2016

#### **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

17 May 2016

Lee Seow Hiang Director

## JOURNEY OF TRANSFORMATION CHANGI AIRPORT GROUP ANNUAL REPORT FY2015/16

#### INDEPENDENT AUDITOR'S REPORT

TO THE MEMBER OF CHANGI AIRPORT GROUP (SINGAPORE) PTE. LTD.

#### REPORT ON THE FINANCIAL STATEMENTS

We have audited the accompanying financial statements of Changi Airport Group (Singapore) Pte. Ltd. (the "Company") and its subsidiaries (the "Group") set out on pages 74 to 78, which comprise the consolidated balance sheet of the Group and the balance sheet of the Company as at 31 March 2016, and the consolidated income statement, statement of comprehensive income, statement of changes in equity and statement of cash flows of the Group for the financial year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility 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 Singapore Companies Act (the "Act") and Singapore Financial Reporting Standards, 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.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Singapore Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal controls relevant to the entity's preparation of financial statements that give a true and fair view 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 entity's internal controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the consolidated financial statements of the Group and the balance sheet of the Company are properly drawn up in accordance with the provisions of the Act and Singapore Financial Reporting Standards so as to give a true and fair view of the financial position of the Group and the Company as at 31 March 2016, and of the financial performance, changes in equity and cash flows of the Group for the financial year ended on that date.

#### 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 subsidiaries incorporated in Singapore, of which we are the auditors, have been properly kept in accordance with the provisions of the Act.

PricewaterhouseCoopers LLP

Public Accountants and Chartered Accountants

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## **CONSOLIDATED INCOME STATEMENT**

	Group		
	2016	2015	
	\$'000	\$'000	
Revenue	2,164,045	2,149,576	
Expenses			
- Employee compensation	(220,944)	(197,768)	
<ul> <li>Depreciation of property, plant and equipment</li> </ul>	(287,254)	(276,451)	
– Property tax	(60,931)	(56,804)	
<ul> <li>Maintenance of land, buildings and equipment</li> </ul>	(279,083)	(278,538)	
<ul> <li>Services and security related expenses</li> </ul>	(167,807)	(174,721)	
<ul> <li>Annual ground rent and licence fees</li> </ul>	(78,650)	(79,380)	
– CAAS services	(129,283)	(132,725)	
<ul> <li>Other operating expenses</li> </ul>	(60,099)	(58,139)	
Total	(1,284,051)	(1,254,526)	
Operating profit	879,994	895,050	
Other income	65,753	51,947	
Share of results of associated companies and joint ventures	8,203	3,880	
Profit before income tax	953,950	950,877	
Income tax expense	(170,221)	(169,368)	
Profit after tax	783,729	781,509	
Attributable to:	706 143	704 402	
Equity holders of the Company Non-controlling interest	786,142	784,492	
Non-controlling interest	(2,413) 783,729	(2,983)	
	/03,/29	781,509	

# CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

	Group		
	2016	2015	
	\$'000	\$'000	
Profit after tax	783,729	781,509	
Other comprehensive loss: Items that may be reclassified subsequently to profit or loss			
Cash flow hedges  – Fair value losses  – Reclassified to investment in associated companies and joint ventures	(1,728) 16,284	(19,059) –	
Currency translation differences  - Losses  - Share of currency translation loss of joint venture	(54,224) (5,425)	(71,779) (11,555)	
Other comprehensive loss, net of tax	(45,093)	(102,393)	
Total comprehensive income	738,636	679,116	
Total comprehensive income attributable to:			
Equity holders of the company	742,841	682,670	
Non-controlling interest	(4,205)	(3,554)	
	738,636	679,116	

	Group		Company		
	2016	2015	2016	2015	
	\$'000	\$'000	\$′000	\$'000	
ASSETS					
Current assets					
Cash and cash equivalents	3,338,023	3,849,014	3,291,275	3,786,365	
Trade and other receivables	192,372	163,777	154,659	147,322	
Held-to-maturity financial assets	30,756	-	30,756	- 17,322	
Other current assets	66,021	53,315	63,162	21,357	
Inventories	10,354	9,051	9,492	8,405	
	3,637,526	4,075,157	3,549,344	3,963,449	
Non-current assets					
Deferred income tax assets	242	123	_	_	
Other non-current assets	1,940	2,006	2,633	38	
Held-to-maturity financial assets	115,735	94,025	115,735	94,025	
Trade and other receivables	_	_	145,599	79,749	
Investments in subsidiaries	_	_	257,965	257,965	
Investments in associated companies	262.406	247.602	10.450	10.653	
and joint ventures	263,186	217,603	10,652	10,652	
Property, plant and equipment	3,905,596	2,773,784	3,878,518	2,758,761	
Property under development	536,450	401,269	4 411 102	2 201 100	
	4,823,149	3,488,810	4,411,102	3,201,190	
Total assets	8,460,675	7,563,967	7,960,446	7,164,639	
LIABILITIES					
Current liabilities					
Trade and other payables	936,572	583,372	868,702	549,684	
Derivative financial instruments	85	8,417	, =	_	
Income received in advance	11,062	15,737	11,076	15,455	
Deferred income	4,698	4,973	4,445	4,445	
Current income tax liabilities	234,796	207,804	231,896	205,836	
	1,187,213	820,303	1,116,119	775,420	
Non-current liabilities					
Loans and borrowings	456,021	344,123	_	_	
Derivative financial instruments	4,823	1,166	-	- 07.210	
Deferred income Deferred income tax liabilities	92,900	97,210	92,900	97,210	
Other non-current liabilities	60,738 72,755	117,445 60,587	60,566 69,424	117,348 59,807	
Other non-current habilities	687,237	620,531	222,890	274,365	
	007,237	020,331	222,070	214,303	
Total liabilities	1,874,450	1,440,834	1,339,009	1,049,785	
NET ASSETS	6,586,225	6,123,133	6,621,437	6,114,854	
EQUITY					
Share capital and reserves	3,209,458	3,167,299	3,365,847	3,280,387	
Retained profits	3,384,526	2,959,388	3,255,590	2,834,467	
	6,593,984	6,126,687	6,621,437	6,114,854	
Non-controlling interest	(7,759)	(3,554)		_	
Total equity	6,586,225	6,123,133	6,621,437	6,114,854	
• •		· · ·			

# CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

	Share capital \$'000	Hedging and other reserves \$'000	Currency translation reserve \$'000	Sinking fund reserve \$'000	Retained profits \$'000	Non- controlling interest \$'000	Total equity \$'000
2016							
Beginning of financial year	3,280,387	(5,527)	(107,561)	_	2,959,388	(3,554)	6,123,133
Dividend paid	_	_	_	_	(275,544)	_	(275,544)
Sinking fund contribution	_	-	_	85,460	(85,460)	-	_
Total comprehensive income	_	16,348	(59,649)	_	786,142	(4,205)	738,636
End of financial year	3,280,387	10,821	(167,210)	85,460	3,384,526	(7,759)	6,586,225
2015							
Beginning of financial year	3,280,387	12,961	(24,227)	_	2,478,088	_	5,747,209
Dividend paid	_	_	_	_	(303,192)	_	(303,192)
Total comprehensive income	-	(18,488)	(83,334)	_	784,492	(3,554)	679,116
End of financial year	3,280,387	(5,527)	(107,561)	_	2,959,388	(3,554)	6,123,133

## CONSOLIDATED CASH FLOW STATEMENT

	2016 \$'000	2015 \$'000
Cash flows from operating activities		
Profit after tax Adjustments for:	783,729	781,509
– Income tax expense	170,221	169,368
– Depreciation of property, plant and equipment	287,254	276,451
– Government grant	(20,731)	(18,312)
– Gain on disposal of a joint venture	(423)	_
<ul> <li>Net loss/(gain) on disposal of property, plant and equipment</li> </ul>	1,468	(19,639)
<ul> <li>Share of results of associated companies and joint ventures</li> </ul>	(8,203)	(3,880)
- Currency translation differences	408	(314)
– Amortisation of deferred income	(4,585)	(3,977)
– Interest income	(53,934)	(34,762)
Changes in working capital	1,155,204	1,146,444
- Inventories	(1,303)	18
– Trade and other receivables	(59,597)	(662)
- Other assets	13,395	(7,702)
– Trade and other payables	62,386	58,429
Cash generated from operations	1,170,085	1,196,527
Interest received	40,544	28,221
Interest paid	(8,162)	_
Government grant received	20,370	18,701
Income tax paid	(211,652)	(171,500)
Net cash provided by operating activities	1,011,185	1,071,949
Cash flows from investing activities		
Additions to property, plant and equipment and capital work-in-progress	(1,139,395)	(509,730)
Additions to property under development	(109,281)	(387,949)
Proceeds from disposal of property, plant and equipment	63	25,036
Proceeds from disposal of a joint venture	5,305	_
Payment for investment in an associated company	(64,315)	(16,436)
Prepayments for investment in an associated company	_	(29,043)
Dividend income received	2,783	3,538
Purchase of held-to-maturity financial assets	(53,265)	(34,653)
Proceeds from held-to-maturity financial assets		50,000
Net cash used in investing activities	(1,358,105)	(899,237)
Cash flow from financing activities		
Proceeds from loan and borrowings, net of transactions costs	111,881	485,329
Repayment of loan to non-controlling interests	_	(141,206)
Dividend paid to equity holder of the Company	(275,544)	(303,192)
Net cash (used in)/provided by financing activities	(163,663)	40,931
Net (decrease)/increase in cash and cash equivalents	(510,583)	213,643
Cash and cash equivalents at beginning of financial year	3,849,014	3,635,102
Effects of currency translation on cash and cash equivalents	(408)	269
Cash and cash equivalents at end of financial year	3,338,023	3,849,014
		-,,-

## LISTING OF SIGNIFICANT COMPANIES IN THE GROUP

		Country of business/		
Name of companies	Principal activities	incorporation	Equity l 2016	2015
		_	%	%
SIGNIFICANT SUBSIDIARIES				
HELD BY THE COMPANY				
Changi Airports International Pte. Ltd.	Investment holding and provision of consultancy services in the field of civil aviation	Singapore	100	100
Changi Travel Services Pte. Ltd.	Sale of travel and tour-related products and packages	Singapore	100	100
Jewel Changi Airport Holdings Pte. Ltd.	Investment holding	Singapore	100	100
HELD BY THE GROUP				
Changi Airport Consultants Pte. Ltd.	Provision of airport related consultancy services	Singapore	100	100
Changi Airport Planners and Engineers Pte. Ltd.	Provision of professional engineering services in the field of civil aviation	Singapore	100	100
Changi Airport Saudi Ltd.	Provision for management and operations services of airports	Saudi Arabia	100	100
Changi Airports China Ltd.	Investment holding	Singapore	100	100
Changi Airports Europe Pte. Ltd.	Investment holding	Singapore	100	100
Changi Airports India Pte. Ltd.	Investment holding	Singapore	100	100
Changi Airports MENA Pte. Ltd.	Investment holding	Singapore	100	100
Theta Enterprise Pte. Ltd. (formerly known as Changi Airports Henan Pte. Ltd.)	Investment holding	Singapore	100	100
Excelente B.V.	Investment holding	Netherlands	100	100
Excelente Brasil Participações Ltda.	Provision of consultancy services	Brazil	100	100
Jewel Changi Airport Devt Pte Ltd	Provision of development, project, and real estate management services	Singapore	51	51
Jewel Changi Airport Trust	Project development, operation and management	Singapore	51	51
Jewel Changi Airport Trustee Pte Ltd	Provision of trustee-management services	Singapore	51	51
Alpha Vela Pte. Ltd.	Investment holding	Singapore	100	_

## LISTING OF SIGNIFICANT COMPANIES IN THE GROUP (continued) For the financial year ended 31 March 2016

		Country of business/		
Name of companies	Principal activities	incorporation	<b>Equity holding</b>	
			2016	2015
		-	%	%
SIGNIFICANT ASSOCIATED COMPANIES	AND JOINT VENTURES			
HELD BY THE COMPANY				
Experia Events Pte Ltd	Organising and management of conferences, exhibitions and other related activities	Singapore	20	20
HELD BY THE GROUP				
Bengal Aerotropolis Projects Ltd	Development of airport and township projects	India	36.3	36.3
Transport AMD-2 Ltd	Investment holding	Cyprus	37.5	37.5
OJSC International Airport Sochi	Provision of airport and related services	Russia	37.5	37.5
OJSC International Airport Krasnodar	Provision of airport and related services	Russia	37.5	37.5
OJSC International Airport Anapa	Provision of airport and related services	Russia	28.1	28.1
Basel Aero LLC	Airport management	Russia	37.5	37.5
Rio de Janeiro Aeroporto S.A	Investment holding	Brazil	40	40
Concessionária Aeroporto Rio de Janeiro S.A	Airport concessionaire	Brazil	20.4	20.4

