



50 YEARS OF AIR TRAVEL IN SINGAPORE

Charting New Horizons



THE SINGAPORE STORY-A CITY THAT GREW WINGS

Scenarios like these are commonplace nowadays: a grandmother flies off from Singapore at 4pm, reaching Los Angeles at 6pm local time the very same day to see her new-born grandchild; a businessman goes to Jakarta in the morning for a client meeting and is home in time for dinner the same evening.

In Asia especially, thanks to rising incomes alongside more affordable flight options with the growth of low cost carriers, commercial air travel has become a lot more accessible today than it was not too long ago. This year, Singapore proudly celebrates 50 years of independence, with decades of hard-earned success. Air travel, in particular, has come a long way since the days at Paya Lebar International Airport (PLA) which handled 1.7 million passengers in 1970. In comparison, 54.1 million passengers passed through Changi Airport's terminals in 2014 – a record number in its 34-year-old history.

FROM PAYA LEBAR TO CHANGI, THE DEVELOPMENT OF SINGAPORE'S AIRPORTS HAS PROVIDED BOTH THE LITERAL AND METAPHORICAL FOUNDATION FOR ITS GROWTH AS A LEADING, WELL-CONNECTED DESTINATION.

One important aspect was growing the city's international air connectivity – most critical in supporting a thriving economy marked by increasing volumes of





trade and tourism. For instance, the opening of the London-Singapore-Sydney trunk route in the 1970s opened up Singapore Airlines' international routes, contributing significantly to traffic inflow and outflow.

Built in the early days of independence, PLA was considered one of the most modern and well-built facilities of its time. Those were the same exciting decades that saw dramatic developments in the global economy, industries and aviation technology – the arrival of commercial jets especially, which significantly altered the flow of people and goods internationally. By 1975, Paya Lebar Airport was operating at maximum capacity, handling four million passengers.

In 1975, then-Prime Minister Lee Kuan Yew made the critical decision to move to Changi – a site that was

five times larger. A long-term and visionary master plan was drawn for a modern airport, effectively catering for the construction of three terminals to be built in tandem with projected traffic growth over two decades. It was the single biggest public project at that time – requiring S\$1.5 billion, six intense years, incredible foresight and the commitment of the entire nation to make it happen.

Singapore has since flown far ahead of the times and Changi Airport has made air travel more than just a functional mode of transport for countless passengers by creating the unique and exceptional 'Changi Experience'. For Singaporeans and local residents, the airport is a beloved icon that not only evokes the familiar feeling of home after a trip but also holds a special significance in their lives.



TRIBUTE TO MR LEE KUAN YEW BY LIEW MUN LEONG, CHAIRMAN, CHANGI AIRPORT GROUP

LEE KUAN YEW, THE FATHER OF CHANGI AIRPORT

Changi Airport is a very strategic international air hub where more than 100 airlines now connect Singapore to more than 300 cities in the world. It has won more than 480 World's Best Airport awards by various rating agencies. It is now known as the "Most Awarded Airport in the world". Many may not realise that Changi Airport was the brain child of the late Mr Lee Kuan Yew.

IN MID-1975, HE DECIDED IT WAS ADVANTAGEOUS TO BUILD THE NEW INTERNATIONAL AIRPORT AT CHANGI. AND HE WAS SINGLE-MINDED ABOUT PUSHING IT TO THE NEW SITE.

In 1974, we had already planned and started construction works to expand the existing Paya Lebar Airport (PLA) to meet the rapidly growing aviation demand. I was then a young PWD engineer busily constructing new aircraft parking apron and clearing resettlement cases (11,000 families had to be resettled) for the second runway at PLA to proceed with construction.

When he flew over Logan Airport, Boston one day, he realised that it was cleverly built as an offshore airport.

He realised that building the new airport at the coast of Changi would give us the flexibility to expand the aerodrome towards the sea to meet future expansion needs. High aviation noise decibel levels would stretch into the seas instead of affecting the population in the city. Moreover, there would be no need to restrict the height of future nearby development and hence, it liberated many hectares of much needed land for development.

There were, however, uncertainties about implementing this strategic shift to Changi. Some quarters within the Government questioned whether the Public Works Department (PWD) could handle such a large scale project and within an ambitious time frame. Rightly or wrongly, the common perception then was that PWD was an old, conservative and bureaucratic department inherited from the past colonial British system. Some sceptics were clamouring, "They only had experience building drains, sewerage, roads, bus stops, government offices and schools. Do they have the expertise and human resources to build such a mammoth international airport?" Most importantly, there were doubts that we could complete it in time by mid 1981, as more than half the site at Changi had to be reclaimed from the sea. Aviation forecast was that we urgently needed the new airport by mid 1981 and we could not afford further delay in its opening.

Mr Lee cleverly directed "Three Wise Men" (that was



our description, not his) to study the feasibility of building the new airport at Changi. These three top civil servants were Mr Howe Yoon Chong, Chairman of Port of Singapore Authority (PSA); Mr Teh Cheang Wan, CEO of Housing Development Board; and Mr Woon Wah Siang, Chairman of Jurong Town Corporation. They had led many successful major national developmental programmes in Singapore and therefore had the credentials to assess the feasibility of the Changi project. Howe Yoon Chong confidently concluded that the project could be implemented, and in time, by PWD with PSA executing the sea reclamation work. Mr Lee later appointed Mr Sim Kee Boon, another legendary leader in the civil service, who had a great eye for details, to drive the project. Mr Lee invested his most capable civil servants to see through the Changi Airport project.

We built the first runway as an extension of the existing British built military runway. It was then 2000 metres long and we had to extend it to 4000 metres by expunging Tanah Merah Road. Mr Lee wanted to see where the extension would be. He wanted to get an aerial view, so we arranged for a Skyvan, a military passenger transport plane to fly him to a height that would allow him to look at the whole construction site. In order for him to spot the site from the air, we marked the site with big yellow aviation balloons tied to the working bulldozers. FROM THE BEGINNING, MR LEE WAS VERY INVOLVED IN HOW HE WANTED THE AIRPORT TO BE BUILT. HE WANTED THE AIRPORT TO BE BUILT WITHIN A GARDEN CITY. HE WANTED A LOT OF TREES TO BE PLANTED, ADDING THAT HE WISHED "TO SEE A JUNGLE" WHEN DRIVING TO THE AIRPORT. WE HAD TO COUNT TREES DAILY AND I SENT TELEXES TO SIM KEE BOON DETAILING THE NUMBER OF CASUARINA AND RAIN TREES WE HAD PLANTED.

Mr Lee's interest in Changi Airport never stopped. In November last year, he visited Changi Airport to update himself of the latest development, particularly the "Jewel" site. He was not very mobile and we took him around in a buggy and also, went on the train ride connecting Terminal 2 to Terminal 3. When I asked him if he had enjoyed the train ride, he said, "Yes, but too short." Mr Lee, till his last days, remained very fond of Changi Airport. Whenever I met him recently, he would never fail to ask me, in his feeble voice," How is Changi Airport?"

What would have happen if Mr Lee did not have the vision to shift the airport site to Changi? If we have remained in Paya Lebar, we would not have the flexibility to construct the third runway (unless we forgo Tampines town), the fourth Terminal, let alone the fifth Terminal, and of course, there will be no Project Jewel. Changi Airport was his baby and it has grown up to be one of his pride. Mr Lee Kuan Yew is truly the Father of Changi Airport! Air travel today is a sophisticated and highly evolved experience, with elements that passengers can enjoy before and after they board the plane. Over the years, Singapore has worked hard to improve existing infrastructure to accommodate the latest aircraft, including a master plan to design a passenger-friendly and award-winning airport.

28 OCT 1959

Qantas' Boeing 707 jetliner touched down at PLA on its inaugural 'Kangaroo Route' flight from Sydney to London



1960

PLA handled more than 300,000 passengers and 30,000 aircraft movements annually. It was served by 11 airlines operating 125 weekly flights. Visitor arrivals hit 0.1 million

Over the next two years, Singapore extended its runway from 2.4km to 2.7km, making it one of the longest runways in Asia then

1 APRIL 1967

BOAC's Super VC-10 - the fastest and most powerful civil jet aircraft of its day, made its inaugural landing at PLA



Basic airport functions and amenities at PLA. Travellers had to walk up and down mobile steps to embark/ disembark from aircraft

The 1970s saw great advancements in aviation which resulted in rapidly growing passenger numbers. From 1970 to 1975, passenger traffic grew almost four-fold from 1.7 million to 4 million passenger movements a year

1971

The arrivals of the DC-8 and Boeing 707 in 1970 were followed shortly by the first Boeing 747 by Pan-American Airways

1972

First Concorde supersonic aircraft landed in PLA between London and Singapore operated by British Airways-Singapore Airlines

1972 Singapore Airlines was formed



1975

With PLA at maximum capacity, decision made to move the airport to Changi 1975 marked the start of Changi Airport's Phase I developments - costing \$1 billion, this was the single biggest public project at that time - which was completed in 1981

1977

Reclamation and earthworks at Changi completed. Construction of Changi Airport commenced

1979

Foundation stone of T1 superstructure was laid

14 JULY 1979

Singapore Airlines and the Civil Aviation Administration of China (CAAC) signed an agreement to establish air links between the two countries allowing each airline to operate three flights a week





29 - 30 JUNE 1981

Shift to new airport at Changi



1991

Changi Airport Terminal 1 became officially operational with the arrival of its first flight at 7am on 1 July - SQ101, carrying 140 passengers from KL. The first departing flight - SQ192, flew off for Penang at 8am on the same day. Changi was among the first few airports to introduce the aerobridge, a sheltered walkway to link passengers directly from aircraft to the terminal building. The first two weeks of opening saw 250,000 visitors - where every tenth person in Singapore came. Paid tours to see the restricted area after immigration were conducted at \$0.50 per head



1981

1 JULY 1981

Changi was served by 34 airlines, 1,200 flights to 67 cities in 43 countries. 8.1 million passengers passed through Changi

1986 -----Construction works for Terminal 2 in progress

1986 Changi Airport surpassed the 10 million passenger mark

1988 Signing of Singapore's first Open Skies Agreement with Qatar, which allowed unlimited traffic rights for passenger and cargo services

1989

Singapore Airlines became the first airline to operate a B747-400 on a commercial flight across the Pacific

1980s

Changi Airport was the first to introduce the concept of airport gardens. and also the first airport in the world to allow passengers to make free

local telephone calls in transit. As an improvement from PLA, passengers at Changi are provided a completely air-conditioned experience from disembarkation till they get into their taxis as even the taxi queues were located indoors



Changi Airport received first the Best Airport award from Business Traveller (UK). Quality Service Management programme established to enhance service standards at Changi

1993

Yik Min

1995

1997

1997



1965-2015 FROM PA THE JOURNEY

Changi was served by 52 airlines, 1,900 weekly flights to 111 cities in 53 countries. Visitor arrivals hit 5.3 millior



Terminal 2 officially opened. Introduction of Changi Skytrain to facilitate passenger movements between the two terminals



The late Princess Diana presented Business Traveller UK awards 1993 to Singapore's Permanent Secretary (Transport), Mr Tiong

Changi was first airport to introduce a rooftop swimming pool within the transit area

Singapore became the first country in Asia to conclude an open skies agreement with the US

Changi Airport surpassed the 20 million passenger mark





1997

Changi Airport celebrated 10 consecutive years of being voted "Best Airport in the World" by Business Traveller (UK)

1998

Introduction of thematic lounges such as News Hub, Sports Arena and Movie Theatre for passengers to 'Enjoy Changi' while in transit

AYA LEBAR TO CHANGI AIRPORT OF AN AWARD-WINNING AIR HUB

By making sure that each traveller who passes through continues to enjoy a journey that is seamless, comfortable and especially memorable by creating the exceptional 'Changi Experience', Singapore has become for many the quintessential gateway through which to see the world.

During this decade, Changi Airport introduced facilities and services to cater to a new generation of technologically-connected travellers. Wireless internet and the world's first infrared internet access kiosks for personal digital assistance gadgets were introduced in 2000. The following year, Broadband Internet Access was consolidated at Changi Airport's E-Hub and by 2004 there were 200 Internet terminals available throughout the airport - a record for any airport worldwide.

To facilitate the travel process, flights alerts were also made available to passengers via SMS and flight information accessible on mobile devices in 2002. In 2004. a six-month trail of the world's first automated system that integrated the check-in and immigration processes for departing travellers. was carried out.

OCT 2000

Construction for Terminal 3 commenced

2000

Changi was served by 64 airlines, 3,400 weekly flights to 145 cities in 50 countries



2001

Changi organised the world's first airport gameshow 'What's Your Range?'

2002 Official opening of Changi Airport Mass Rapid Transit (MRT) station

2004

Construction of Budget Terminal for low cost carriers commenced

2004

Valuair became the first Singapore-based low cost carrier and started its maiden flight

2004

SIA was the first airline to operate the world's longest non-stop commercial flight between Singapore and Los Angeles on the A340-500

2004 -----

'Spiderman' climbs down Changi's 80-metre high Control tower in conjuction with the release of Spiderman movie in Singapore

2004

Changi Airport surpassed the 30 million passenger mark

2006 Terminal 2 completed a

S\$240million upgrading project.

2006

Changi Airport won the 'Airport of the Year' title for the first time at the Skytrax World Airport Awards

26 MAR 2006 Budget Terminal opened





Changi Airport celebrated 25th anniversary

OCT 2007

Changi Airport was the first airport to welcome the Airbus 380. SIA became the world's first airline to fly the A380 between Singapore and Sydney

2008

The Singapore-Kuala Lumpur route was fully liberalised. Singapore and Malaysian carriers allowed to operate unlimited frequencies between the two capitals

9 JANUARY 2008

Changi Airport Terminal 3 opened, featuring world's first of-of-its kind unique butterfly roof to allow optimal sunlight into the terminal building

2008

The Butterfly Garden in Terminal 3 was opened, a world's first in an airport. designed as a tropical nature retreat and home to more than 1,000 free roaming butterflies



MAY 2008

Upgrading works at T1 began. Costing S\$500 million, extensive refurbishments to the terminal's interior were carried out in phases

1 JULY 2009

Changi Airport is corporatised and managed by Changi Airport Group



MAY 2010 Singapore's tallest slide 'Slide@T3' introduced

2010

'Be A Changi Millionaire' retail promotion launched, largest cash prize in Singapore

2010

Changi Airport also surpassed the 40 million passenger mark. Intraregional connectivity in ASEAN was fully established with the commencement of thrice-weekly services between Singapore and

Vientiane. Singapore was now connected via direct flights to all nine other ASEAN countries

2011 -----Introduction of Changi Rewards card programme to encourage retail and dining spend at the airport





initiative, deploying roving customer service officers across the airport to help visitors and passengers



MAR 2011

Changi Airport directly connected to Brazil with the launch of SIA flights to Sao Paolo

2012



2012 Changi surpassed 50 million passenger mark

Closure of Budget Terminal to make

way for Terminal 4

2012 With the proliferation of mobile technology, the iChangi HD app was launched to provide passengers with real-time access to flight details, terminal maps and information about airport offerings

JUNE 2015

MAR 2015



2011 Changi Airport introduced the Changi Experience Agents (CEAs)



DEC 2014

2012

2013

2013

NOV 2013

Traveller UK



Terminal 1 upgrading completed. Kinetic Rain, world's largest kinetic sculpture, unveiled in Departure Hall

Changi Airport received 25th consecutive Best Airport awards by Business

Plans for development of Jewel Changi Airport, Changi East, three-runway system and Terminal 5 announced

A new online shopping portal, iShopChangi, was also introduced to offer passengers greater convenience, comfort and value

Construction for Terminal 4 commenced



Construction for Jewel Changi Airport commenced. For seamless connectivity, the Fast and Seamless Travel at Changi (FAST@ Changi) programme was rolled out and will be implemented in phases across the airport, including the new T4



Changi Airport received Skytrax's World's Best Airport award for three consecutive years since 2013, making it the sixth time to win this recognition

Changi Airport is today the world's most awarded airport, with over 480 best airport awards since opening in 1981

EXCEPTIONAL JOURNEYS FROM GROUND UP

Behind Changi Airport's award-winning experience, countless individuals work round the clock to provide passengers with seamless processes and distinctive service. Within this community are a special few who have witnessed the incredible progress from Paya Lebar International Airport (PLA) to the early days at Changi Airport and who are still in service today. Their stories contain precious anecdotes that form the paving stones of our journey towards becoming one of the leading airports in the world.

CORINNE CHIA CUSTOMER SERVICE OFFICER (CSO) CHANGI AIRPORT GROUP YEARS OF SERVICE: 35 YEARS

At PLA, Ms Corinne Chia was one of about 20 Customer Service Officers (CSOs) or "Airport Hostesses", as they were referred to then, stationed at the arrival hall information desk at what was commonly called the "mushroom counter".

In their fiery red uniforms, they deftly handled public announcements and general queries. Back then, everything from announcement scripts to flight information was handwritten on paper strips which were then manually arranged according to the latest known schedule.

Today, Changi Airport's CSOs like Corinne oversee the hundreds of roving Changi Experience Agents (CEAs) who ensure that passengers are well taken care of. Although technology has greatly improved operations, one of the main challenges today is managing the high expectations of a large and growing number of passengers.

To go the extra mile, staff are strongly encouraged to develop not just familiarity with airport facilities and interesting facts about Singapore but also greater general knowledge and communication skills.

Corinne herself overcame personal anxieties to master the use of computers and is grateful for the

opportunities to learn and be part of the airport community. "You need to like people and have the heart for service," she says of her work. "I do and that is why I've stayed so long."

FOO SEE SAN SENIOR ASSOCIATE, AIRPORT OPERATIONS CHANGI AIRPORT GROUP YEARS OF SERVICE: 45 YEARS

For Mr Foo See San, the best lessons are learnt on the job, through observation, asking questions and talking to experienced people. With extensive experience in airside operations, his role is rarely seen by the public but vital in shaping the development of air travel and aviation in Singapore.

He had initially wanted to be a prison warden but was deemed too skinny for the role. He has no regrets, however, having seen the airport grow over the years and witnessing the arrival of aircraft like the Boeing 747, Concorde and superjumbo Airbus 380 (A380).

The introduction of the A380 in 2008 presented him with the challenge of adjusting airside infrastructure and facilities to accommodate the larger aircraft dimensions, from ensuring that operations were ready to training ground handling staff on operating the catering hi-lift and new docking procedures. Today, Changi Airport's clockwork efficiency testifies to a job well done.

Foo's dedication also earned him the top prize for his submission in the Staff Suggestion Scheme. Spotting a



gap in the baggage handling system, he consulted with engineering colleagues and even produced a prototype to address the recurring problem. The solution worked and resulted in significant cost savings.

With the airport constantly evolving, there is never a dull day at work and Foo remains passionate about his job, finding satisfaction in sharing what he knows with the next generation who will maintain Changi Airport as one of the best in the world.

PRASAD NAIR AIR TRAFFIC CONTROL OFFICER CIVIL AVIATION AUTHORITY OF SINGAPORE YEARS OF SERVICE: 34 YEARS

On his first day, Prasad Nair took hours to locate the Singapore Air Traffic Control Centre and upon arriving, was unfortunately mistaken for the prata man. Still, this did not deter him from joining the team working tirelessly to ensure that every plane which took off or landed in Singapore did so safely and efficiently.

He had originally wanted to join airside Apron Control which seemed much more interesting as he got to do tasks like facilitate road closures to make way for landing aircraft. Being posted to Air Traffic Control (ATC), however, turned out to be an empowering and eye-opening experience, and he admits that he is now happiest when 'in the seat' as he calls it.

Besides managing the significant increase in air traffic over the last decades within a very limited airspace, one of the challenges ATC officers like Prasad face is adapting existing procedures to cater for the arrival of bigger and faster planes, even with the help of sophisticated technology. Today, the Control Tower is manned by one manager and eight air traffic controllers; in the early 1980s, it required only three.

Prasad is most heartened when pilots express thanks for a smooth landing or takeoff, and when trainee

controllers he had taught attain their certifications. In today's complex environment, he says, new officers not only must be technically competent but also be able to think on their feet and learn from mistakes made. For him, it is a learning journey that lasts a lifetime.

KHOO CHAI BENG SATS DUTY MANAGER, CATERING YEARS OF SERVICE: 45 YEARS

Hailing from a kampong with little education, Mr Khoo Chai Beng's first day at work involved scrubbing pots in the kitchen. 45 years later, he now oversees all flight catering operations at SATS Inflight Catering Centre 1 (OICC 1).

Witnessing the transition from an open-air, zinc-roofed kitchen to the high-tech setup today, Khoo vividly remembers the early days of manual operations where every order change meant a trip down to the kitchen to convey the information. Even tons of fruits were cut daily by hand!

The move to Changi Airport saw dramatic improvements with the introduction of computerised systems and automation. A central database made it easier to track orders and inventory – each meal had a bar code which contained information such as contents and expiry dates. Kitchen capacity also grew from 10,000 meals a day at PLA to 60,000 at OICC1, reflecting the exponential growth in air travel and passenger traffic. Today, one of the challenges Khoo faces lies in meeting the 2-hour turnaround limit to transfer in-flight meals and equipment whenever there is a change in aircraft.

There will be greater use of technology in the future, according to Khoo but his advice to the younger generation is simple – work hard, be humble and learn to manage relationships, wise words that go a long way.



A SIGHT OF THINGS TO COME

Today, Singapore is an iconic stop on the world map for travellers who recognise Changi Airport for its unique and unrivalled airport experiences which have become synonymous with global connectivity, clockwork efficiency and exceptional facilities that are one-of-a-kind.

Changi continues to evolve ahead of the growing volume and increasingly sophisticated needs of passengers. From the upgrading of Terminal 1 to the development of Terminal 4, Jewel Changi Airport and the Changi East development, Singapore aims to set new standards for aviation excellence with creative solutions and signature experiences that will redefine air travel for generations to come.

"IN THIS DAY AND AGE, THE PROCESS OF TRAVELLING IS NO LONGER JUST A FUNCTION OF MOVING FROM ONE PLACE TO ANOTHER. IT IS AN EXTENDED EXPERIENCE THAT ALSO INCLUDES THE HOURS BEFORE AND AFTER A FLIGHT, AND THAT'S WHERE WE COME IN TO OFFER SERVICES, AMENITIES AND AN ATMOSPHERE THAT PASSENGERS CAN ENJOY COMFORTABLY.

What we are building on is an airport that Singapore can truly be proud of, one that captures the hearts and minds of travellers no matter where they come from," says Lee Seow Hiang, CEO, CAG.



TERMINAL 4

What to look out for:

- A full suite of self-service check options for fast and seamless travel
- A new walk-through retail concept dedicated to retail and dining in the departure/immigration area.
- A 200m Central Galleria that provides visual connectivity across the Check-in Hall, Transit Lounge and Arrival Baggage Claim Hall – the first of its kind in Changi Airport.

Projected passenger handling

capacity: 16 million passengers per annum

Target date of completion: 2017

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JEWEL CHANGI AIRPORT

What to look out for:

- Unique leisure attractions including a lush indoor garden with a central waterfall of about 40m in height.
- A wide range of retail and dining offerings.
- Facilities dedicated to fly-cruise and fly-coach passengers providing even more options for seamless connectivity.

Projected passenger handling capacity: 24 million passengers per annum

Target date of completion: 2018



CHANGI EAST DEVELOPMENT INCLUDING TERMINAL 5

What to look out for:

- New mega terminal and one of the world's largest, Terminal 5 will be linked to Changi's existing terminals.
- The implementation of a 3-runway system to handle larger passenger aircraft, together with 40km of new taxiways that will connect Runway 3 to the current airfield

Projected passenger handling capacity: 50 million passengers per annum in first phase

Target date of completion: mid-2020s

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