ASIA'S HUBS – Dynamics of Connectivity

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ASIA'S HUBS – DYNAMICS OF CONNECTIVITY

OAG takes a deep dive into the traffic flows at Asia's primary hub airports to gain a greater understanding of the dynamics of connectivity.

How are travellers using each of these airports to connect? Which connecting traffic flows are they serving well? And how is airline strategy influencing the development of these airports as hubs? We'll be looking at each airport, starting with Hong Kong, Asia's primary international hub airport.

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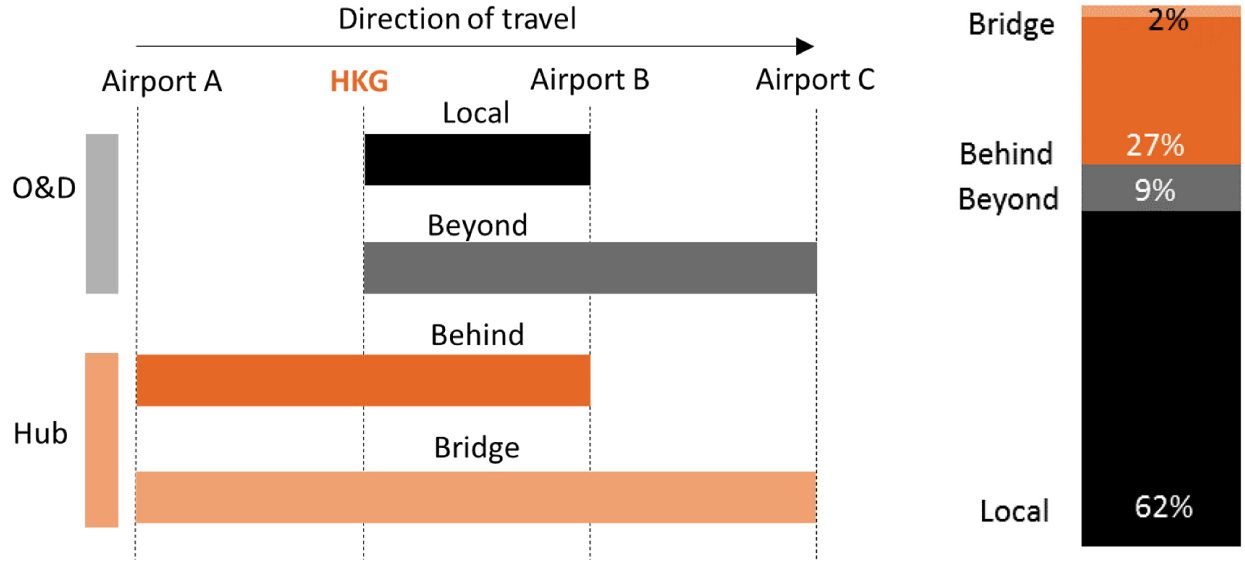
HONG KONG:
AN INTERNATIONAL HUB ICON

As one of the world's pre-eminent trading centres, Hong Kong has always thrived on being connected to anywhere and everywhere that people want to trade. Travel and trade go hand-in-hand and so the success of Hong Kong has always been linked to its connectedness to the rest of the world. A typical day has airlines providing almost 1,000 flights into and out of Hong Kong International Airport (HKG), and connecting the city directly with 123 other cities. This connectedness, used well, has created the most powerful hub airport in Asia, with close to 20 million passengers using it as a place to connect between flights each year.

In the twelve months to February 2017, OAG Traffic Analyser reports a total of 66.8 million passenger bookings using Hong Kong International Airport. (This figure excludes non-revenue passengers and passengers on unscheduled flights which may be recorded in other statistics). Of these, 29% were using Hong Kong Airport to connect between flights while the remaining 71% used it as the start or end of their journey. Over the year, passengers used Hong Kong as a connecting point between an incredible 2,891 country pairs.

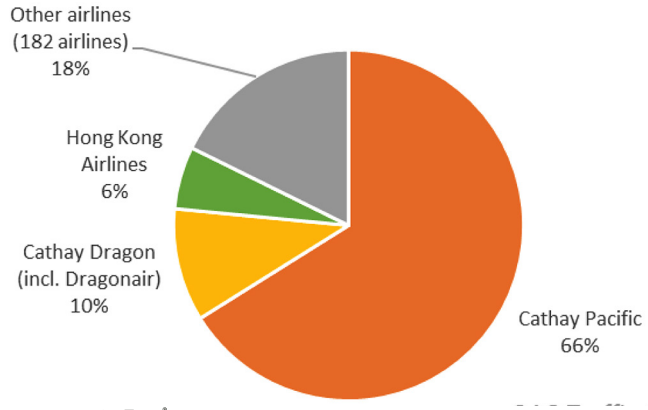
Composition of Traffic at HKG Airport



The success of the airport as a hub is almost entirely driven by the relationship with Cathay Pacific. The airline's recent rebranding of Dragonair as Cathay Dragon, a full-service carrier with a Chinese 'feel' to it, is clearly designed to drive even more connecting traffic to and from China via this historic trading port. Cathay Pacific currently accounts for two-thirds (66%) of all hub bookings at the airport, and Cathay Dragon accounts for a further 10%. It will be no surprise that the largest single origin for connecting passengers is China, which makes up 35% of connecting flows.

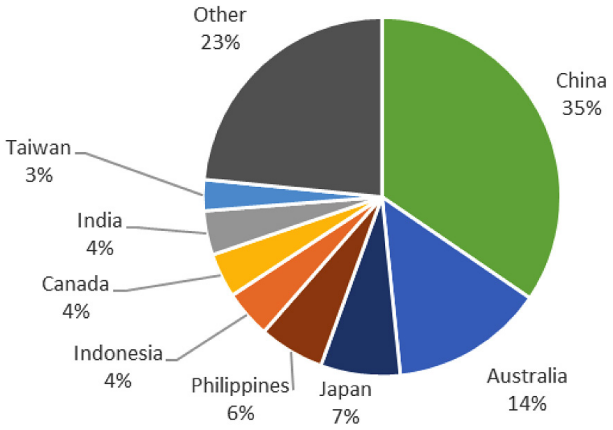
The role that China plays in Hong Kong's hub ambitions is clear when looking at the Top 20 Country Pairs for connecting traffic via Hong Kong. The largest single country-pair connecting flow at Hong Kong, accounting for 6.1% of all hub traffic, connects passengers travelling between China and Taiwan. China is at one end out of 11 of the Top 20 Country pairs.

Connecting traffic at HKG by Airline



Source: OAG traffic analyser

Origin of hub traffic at HKG



Aside from a focus on China, the connecting strategy at Hong Kong draws on the scale of long-haul connectivity at the airport with significant volumes of long-haul traffic connecting at Hong Kong. Nine of the Top 20 connecting country-pair traffic flows involve either Australia, the US or the UK.

The Oneworld position in Asia is relatively weak. Given that Cathay Pacific and Cathay Dragon contribute 76% of hub bookings, the fact that the Oneworld share of hub bookings at Hong Kong, including Cathay Pacific and its affiliates, is 81% shows that the alliance is not contributing significantly to the hub success. Having recently posted its first loss in eight years, Cathay Pacific is surely focussing on getting its strategy right and it may be no surprise if the airline is looking for a range of partnerships, sometimes outside Oneworld, as part of a hub strategy which seeks to maintain Hong Kong as the premier connecting airport in Asia. An example is the March 2017 announcement to code-share with Lufthansa, a member of the Star Alliance, which will give Lufthansa access to Cathay Pacific routes in Australia & New Zealand (SYD, MEL, CNS, AKL) for flights from MUC, VIE and ZRH, while Cathay Pacific will gain access to points beyond FRA, DUS and ZRH in Europe.

This leaves a question mark over the Lufthansa/Singapore Airlines partnership but, as we will see in the next report in this series, the hub strategy there appears to be much more regionally focussed.

Top 20 Country Pairs connecting via HKG – March 2016-February 2017

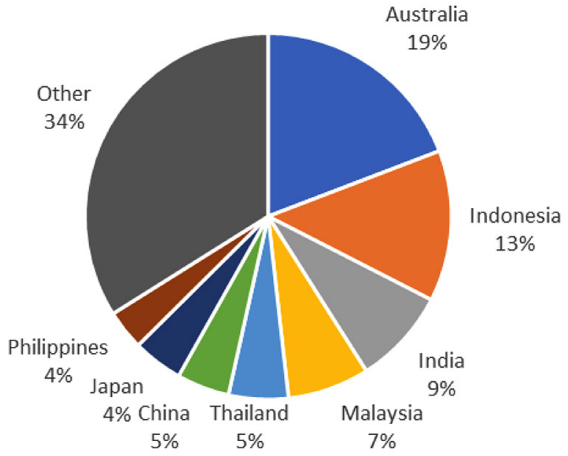
Country Pair	Hub Bookings	Share
China-Taiwan	1,203,470	6.1%
China-Thailand	798,744	4.1%
Australia-China	776,736	4.0%
China-United States	628,930	3.2%
China-Indonesia	573,324	2.9%
China-India	485,472	2.5%
Philippines-United States	477,020	2.4%
China-Singapore	421,098	2.2%
China-Malaysia	419,488	2.1%
Japan-Thailand	380,958	1.9%
Australia-United Kingdom	331,156	1.7%
United States-Vietnam	317,888	1.6%
India-United States	259,828	1.3%
Australia-Japan	256,116	1.3%
Thailand-United States	251,650	1.3%
Taiwan-United States	218,250	1.1%
Indonesia-Taiwan	217,302	1.1%
China-Philippines	216,968	1.1%
China-Vietnam	213,574	1.1%
China-Japan	213,138	1.1%

Source: OAG traffic analyser

SINGAPORE:
REGIONALLY RELEVANT

As we continue to review Asia's hub connectivity, we look at Singapore Changi Airport, the second largest scheduled airline hub operation in Asia, after Hong Kong. Singapore has been consciously built into a major regional hub. This must, in good measure, be a consequence of the geography of this city-state. While Hong Kong sits on China's doorstep, and clearly requires a hub strategy that can capitalise on the rapidly growing demand by Chinese citizens for global travel, Singapore's location offers a very different opportunity.

Origin of hub traffic at SIN



Historically, Singapore was the transit point for travellers on the 'Kangaroo Route', connecting Europe and Australia. While that is still extremely important, Singapore's convenient location between two of the most populous countries in the world, India and Indonesia, as well as a range of popular tourist destinations in the region, means that a strategy for the future which has more focus on playing a regional hub role makes a lot of sense. Today, Australia is the largest country origin for connecting traffic at Singapore, making up almost a fifth of connecting bookings, while Indonesia and India are the next largest markets.

Of the 57 million scheduled passenger bookings recorded at Singapore Changi Airport over a year, 26%, or 15 million, are using the airport to connect between flights. (These figures exclude non-revenue passengers and passengers on unscheduled flights which may be recorded in other statistics). The Top 20 country pairs for traffic flows connecting via Singapore shows the ongoing importance of the Kangaroo route, with Australia-UK the second largest connecting traffic volume. Australia features in nine of the Top 20 connecting flows, although aside from the UK, they are all for travel to Asia. The largest connecting flow is between Australia and India with over a million connecting passengers annually.

This list clearly shows the strong regional connecting traffic flows that have been developed at Changi. This success can be attributed to the Singapore Airlines Group with its clear strategy to segment the market so that it is served by four distinct brands, Singapore Airlines, SilkAir, Scoot and Tigerair Singapore.

Top 20 Country Pairs connecting via SIN – March 2016-February 2017

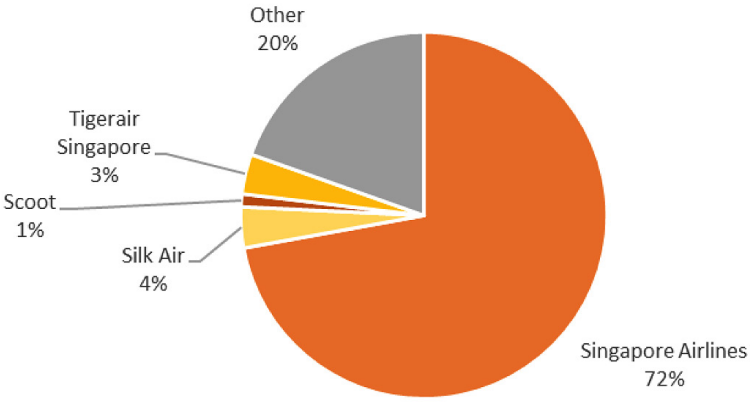
Country Pair	Hub Bookings	Share
Australia-India	1,129,962	6.1%
Australia-United Kingdom	540,450	4.1%
Australia-Thailand	453,520	4.0%
Indonesia-Japan	430,440	3.2%
China-Indonesia	410,012	2.9%
Australia-Vietnam	400,992	2.5%
India-Indonesia	362,034	2.4%
Australia-Malaysia	330,646	2.2%
Hong Kong-Indonesia	309,188	2.1%
Australia-China	307,916	1.9%
Indonesia-Thailand	273,664	1.7%
Australia-Sri Lanka	236,976	1.6%
Australia-Philippines	235,300	1.3%
Australia-Japan	225,150	1.3%
Indonesia-Malaysia	203,296	1.4%
Japan-Malaysia	187,384	1.3%
Germany-Indonesia	171,656	1.1%
China-Malaysia	169,458	1.1%
India-New Zealand	153,884	1.0%
Indonesia-United Kingdom	148,262	1.0%

Source: OAG traffic analyser

Between them, these four airlines handle 80% of all connecting passengers.

With India and Indonesia set to becoming even stronger economic forces in the region, and plans to accommodate yet more passengers (see OAG article **Changi Plans: Building before they come**), Changi is clearly well placed to respond to its emerging travel needs.

Connecting traffic at SIN by Airlines

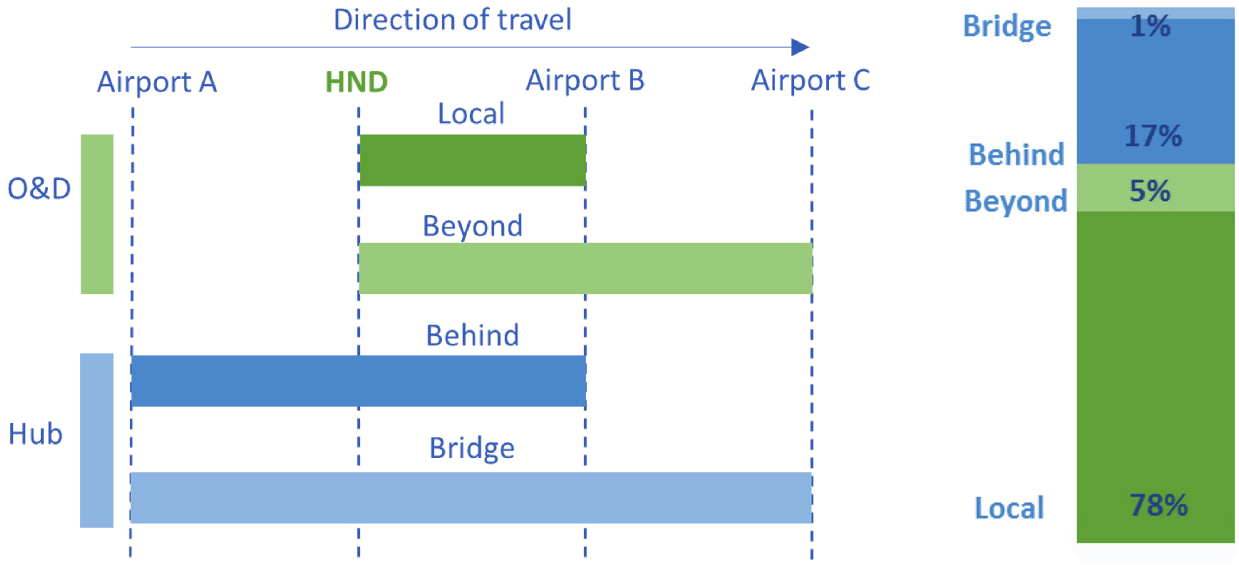


Source: OAG traffic analyser

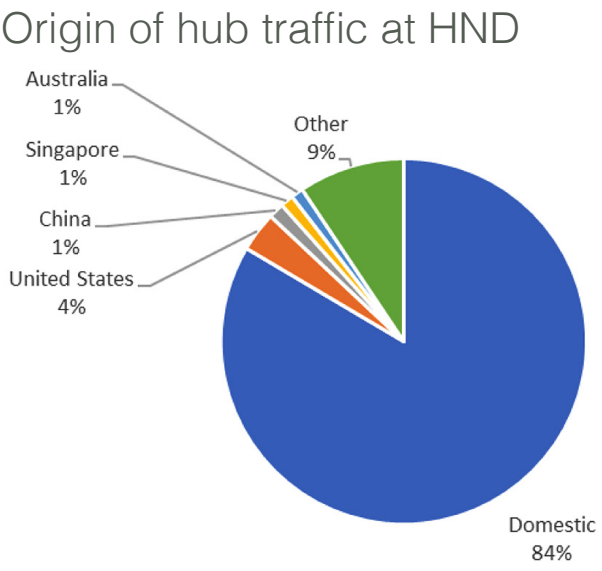
HANEDA:
JAPAN'S BEATING HEART

While Hong Kong has carved out a role as an international connecting point, especially for people wishing to travel to and from China, and Singapore is developing as a regional hub for South East Asia, the profile of connections at Haneda is completely different.

With annual passenger bookings of around 70 million, according to OAG Traffic Analyser, the airport is busier than either Hong Kong International Airport or Singapore Changi International Airport, and dominates Japan's air transport sector, as OAG wrote about earlier this year in The Haneda Story. However, whereas 20% of passengers connect between flights at Hong Kong and 26% do the same at Singapore, at Haneda the proportion connecting is much lower, at 18%, although this still means that over 12 million people are using the airport as a transit point each year.



A key distinction at Haneda is that the vast majority of connections are domestic. Over 70% of all connecting passengers travel between an origin in Japan and a destination also in Japan. Although data for 12 months shows that connecting domestic passengers travelled between as many as 782 airport-pairs, travel to or from Sapporo (CTS) dominates the list, and features in 28% of all domestic connecting journeys.



Source: OAG traffic analyser

Hub traffic via HND – March 2016-February 2017

Bookings by country pair

Country Pair	Hub Bookings	Share
Japan-Japan	8,798,338	70.7%
Japan-United States	699,002	5.6%
China-Japan	274,062	2.2%
Japan-Singapore	242,938	2.0%
Australia-Japan	222,686	1.8%
Japan-South Korea	198,298	1.6%
Germany-Japan	196,646	1.6%
France-Japan	190,740	1.5%
Canada-Japan	187,328	1.5%
Japan-United Kingdom	174,582	1.4%

Bookings by domestic airport pair

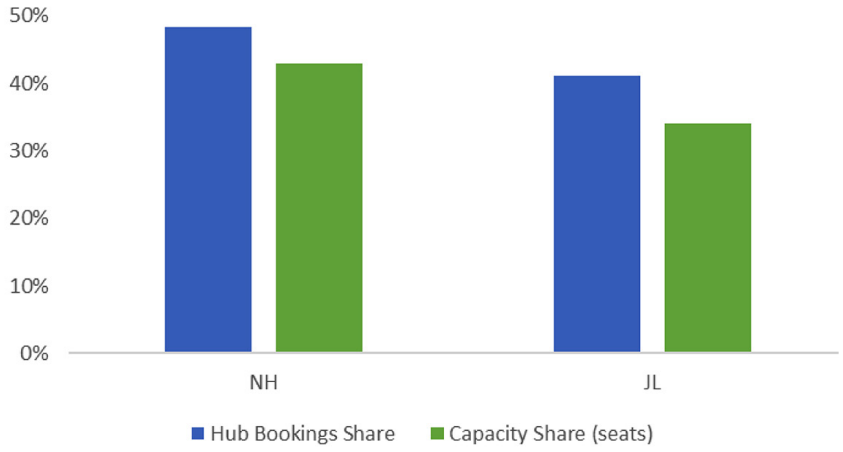
Airport Pair	Hub Bookings	Share
CTS-FUK	268,584	3.1%
CTS-OKA	251,146	2.9%
CTS-KOJ	211,640	2.4%
CTS-MYJ	164,846	1.9%
CTS-ITM	141,556	1.6%
CTS-KMJ	134,348	1.5%
KCZ-OKA	115,568	1.3%
CTS-KMI	109,262	1.2%
CTS-OIT	106,114	1.2%
CTS-HIJ	101,642	1.2%

Source: OAG traffic analyser

Even international connections at Haneda tend to have an origin or destination in Japan, and none of the Top 10 country pairs feature an international-to-international connection.

Unsurprisingly, most of the domestic connecting traffic flies on one of the two main full service carriers in Japan, All Nippon Airways and Japan Airlines. However, given that the share of capacity for the same 12 months is similar to the share of hub bookings, this appears to be less the consequence of planned targeting of connecting traffic and more the result of the scale and convenience of connecting at Haneda.

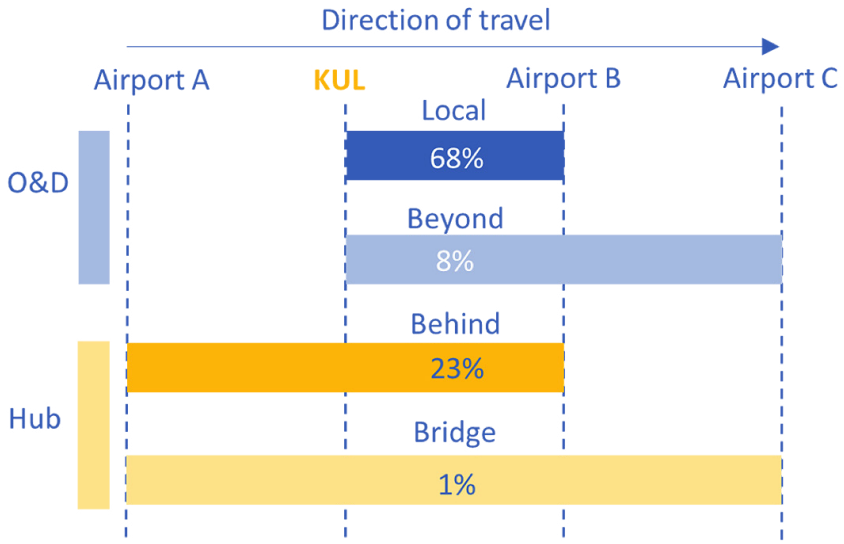
Hub bookings and capacity share at HND



Source: OAG analyser

KUALA LUMPUR: LEADING WITH LOW-COST

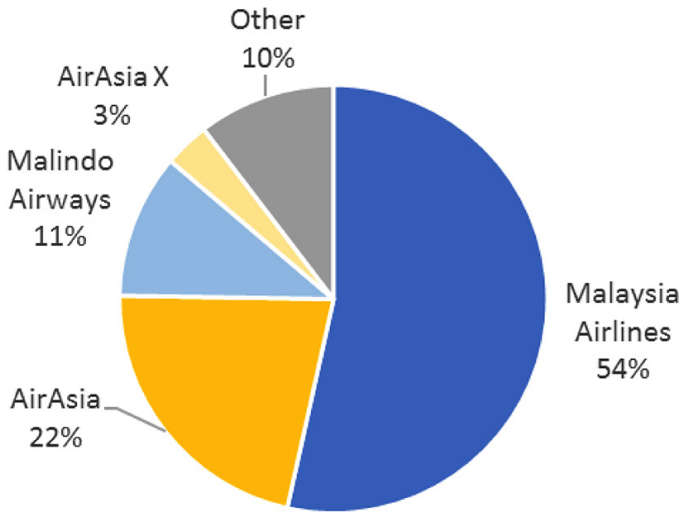
Kuala Lumpur International Airport (KUL) is an airport that stands out as cutting new ground, remarkable for the way that AirAsia has successfully built a low-cost airline hub operation. It is one thing for an airport to have the potential for large volumes of low-cost connecting traffic, and quite another to succeed in facilitating low-cost connections. While Kuala Lumpur International Airport ranked 10th for low-cost connectivity in OAG's Megahub Index 2016, the Index reflects what is possible rather than reality; it may rank much higher if actual low-cost connections were measured.



Of the 51 million passenger bookings to and from KUL in the 12 months up to February 2017, 12.1 million – or 24% - were connecting between flights at the airport. That's a higher proportion than at Bangkok Suvarnabhumi International Airport (BKK) and not much less than at Singapore Changi Airport (SIN). Over half of connecting passengers travel on Malaysia Airlines but AirAsia and AirAsia X together now account for a quarter of all hub traffic at the airport.

Originally known as providers of point-to-point air services, AirAsia's Fly-Thru connecting product enables passengers to transit KUL without the need to collect their bags. For international connecting passengers, there's no immigration clearance and exemption from the airport tax. If a connecting flight is delayed, the airline will book a passenger on another flight for free.

Hub traffic at KUL by airline

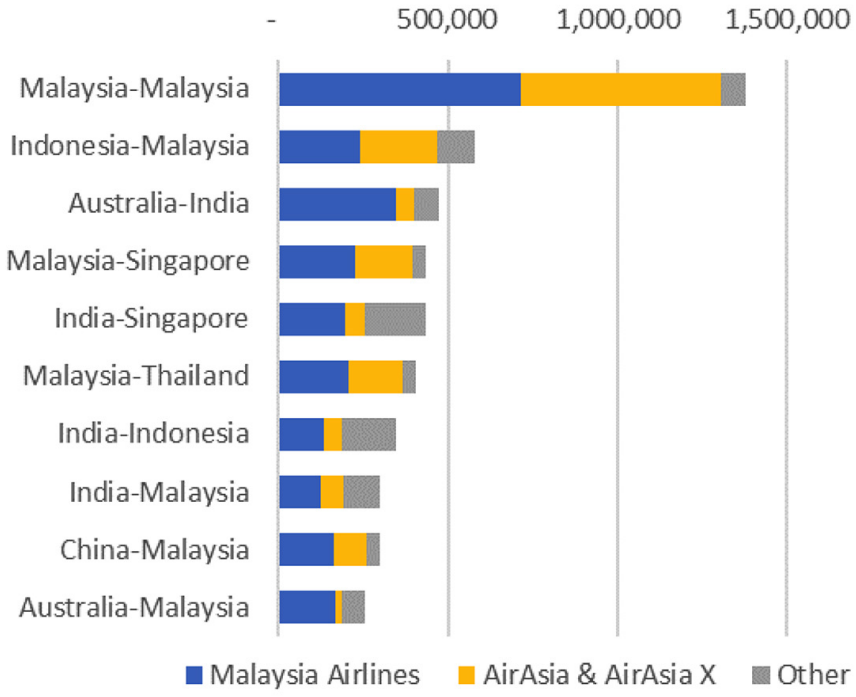


Source: OAG traffic analyser

As a result, far from carving out entirely distinct markets, AirAsia is attracting connecting passengers who are travelling on very similar country pairs to the ones that Malaysia Airlines attracts. On many of the Top 10 connecting country pair markets, Air Asia is clearly competing strongly with Malaysia Airlines, especially in the domestic market, between Indonesia and Malaysia, between Malaysia and Singapore and between Malaysia and Thailand. Where AirAsia has a smaller proportion of connecting traffic is on connections to and from India.

While there are good examples of airports facilitating self-connections for passengers travelling on low-cost airlines, such as Gatwick Airport, and there are other low-cost airlines facilitating connectivity, such as the Value Alliance, AirAsia's success leaves little to differentiate it from a full service carrier.

Hub traffic at KUL by country pair
March 2016-February 2017



Source: OAG traffic analyser

BANGKOK:
THE TOURISM HUB

The distinguishing feature of the hub at Bangkok's Suvarnabhumi International Airport (BKK) is how it is manages to use its strength as an international aviation hub to drive traffic for Thailand's tourism market.

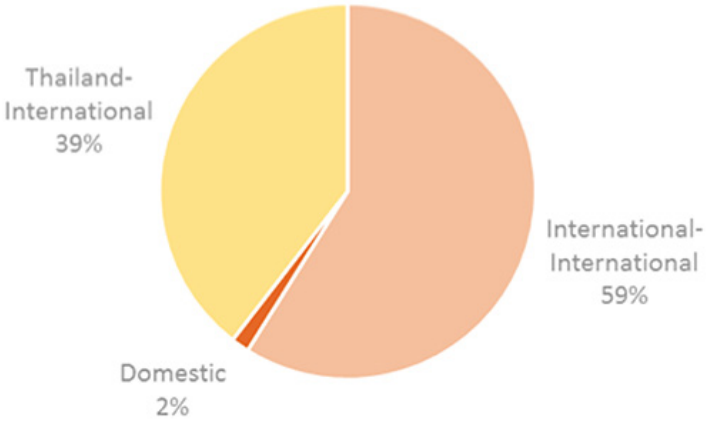
According to OAG Traffic Analyser, 52.7 million scheduled airline bookings operated in and out of BKK in the 12 months to February 2017, 11.5 million of which were passing through as they connected between flights. The proportion of hub traffic that uses BKK to connect between domestic flights is minimal, while 59% connects between international flights and the remaining 39% connect between an international and a domestic flight.

In the 12 months to February 2017, passengers travelled between 2,734 different country pairs via BKK, almost as many as Hong Kong achieves. The largest volumes are from China, Japan, India, Germany and the UK to and from Thailand. Each of these country pair routings succeeds in attracting over 300,000 passengers annually.

The largest international-to-international passenger flows are between Australia and India, China and India, and China and Pakistan.

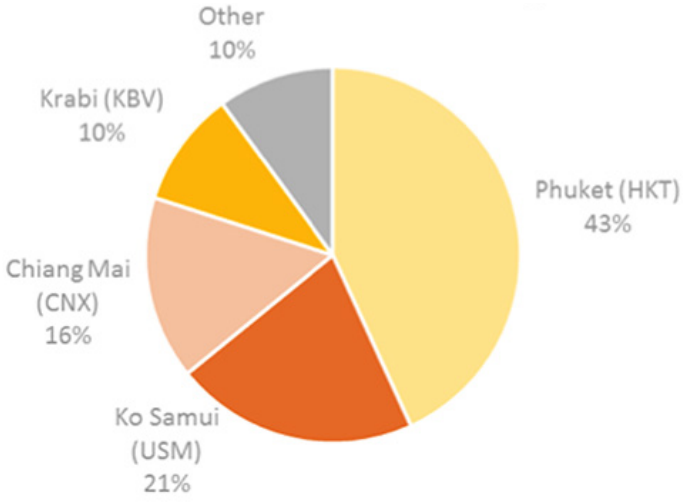
For the 39% of passengers travelling via BKK to destinations in Thailand, four Thai airports account for 90% of traffic. These are the dominant tourist destinations of Phuket, Koh Samui, Chiang Mai and Krabi. In total, over a third of all connecting passengers at BKK are headed to or from Thailand's tourist hotspots. While this is great for BKK, there is a risk that if airlines choose to serve those destinations with new aircraft types, such as the A320neo which OAG identified as one of the drivers for change in its recent Asia's Catalysts report, it will make these 'thinner' routes more cost effective, bypassing BKK entirely.

Profile of BKK hub traffic



Annual connecting passengers at BKK
11.5m

Thai destination BKK connecting traffic



Source: OAG traffic analyser

Top 20 Country Pairs connecting via BKK – March 2016-February 2017

Country Pair	Hub Bookings	Share
China-Thailand	553,310	4.8%
Japan-Thailand	470,720	4.1%
India-Thailand	399,584	3.5%
Germany-Thailand	394,544	3.4%
Thailand-United Kingdom	317,398	2.8%
Australia-Thailand	277,928	2.4%
Australia-India	273,472	2.4%
China-India	248,704	2.2%
Thailand-Thailand	178,484	1.6%
France-Thailand	175,768	1.5%
China-Pakistan	172,412	1.5%
South Korea-Thailand	170,204	1.5%
Switzerland-Thailand	138,808	1.2%
India-Japan	136,390	1.2%
India-Vietnam	125,750	1.1%
Sweden-Thailand	123,640	1.1%
Australia-Pakistan	115,044	1.0%
Denmark-Thailand	114,426	1.0%
Australia-United Kingdom	111,748	1.0%
Taiwan-Thailand	107,374	0.9%

Source: OAG traffic analyser

SUMMARY

ASIA'S FUTURE HUBS

The sheer size of airline traffic being generated by China is changing how we should view Asia's hub airports. While the dominant Asian hubs continue to include familiar names – Hong Kong, Singapore, Bangkok – the big three Chinese airports are catching up fast and it may only be a few years before they are handling connecting traffic flows as large as, or larger than those of the established hubs.

OAG has identified the five largest hub airports in Asia today in terms of the volume of connecting passengers they handle. Each one has carved out a role which gives the hub specific characteristics.

- The largest and most truly international, Hong Kong International Airport, handles 66.8m passengers each year, according to OAG Traffic Analyser (12 months to February 2017). Nearly 20 million of those passengers are connecting, or 29%. Cathay Pacific is key to the success of the hub, and with its rebranding of Dragonair to Cathay Dragon, it is clearly working hard to offer a convenient access point between China and the rest of the world.

- Singapore Changi Airport is building on its convenient location as it is between two of the largest countries in the world, India and Indonesia, making it a super functioning regional hub. The kangaroo route still contributes significantly to connecting traffic but travellers are as likely to be travelling between Australia and other parts of South East Asia. The total volume of connecting passengers is 14.9 million, or 26% of the total volume of traffic.

- Haneda International Airport is Asia's third largest hub airport but distinguishes itself by the sheer proportion of passengers which are connecting domestically. With connecting traffic of 12.4 million, or 18% of the total passenger volume, 70% are making domestic connections.

- The unique feature of the Kuala Lumpur International Airport hub is the remarkable level of connectivity for passengers flying with low-cost airlines. Overall, 24% of the 51 million passengers using the airport are connecting and of these, over a quarter are travelling on either AirAsia or AirAsia X.

- Key to connecting traffic at Bangkok Suvarnabhumi International Airport is the ability of the airport to funnel holidaymakers to and from Thailand's holiday destinations, making the airport a tourism hub. Of the 53 million passengers using the airport, 11.5 million are connecting and of these, nearly two in five are travelling from outside Thailand to one of four destinations in Thailand.

Asia's largest hub airports – 12 months to February 2017

Hub Airport	Passengers (millions)	Hub Passengers (millions)	Hub Share	Key characteristic of hub
Hong Kong	66.8	19.6	29%	International
Singapore	57.3	14.9	26%	Regional
Haneda	69.6	12.4	18%	Domestic
Kuala Lumpur	51.2	12.1	24%	Low cost
Bangkok	52.8	11.5	22%	Tourism

Source: OAG traffic analyser

While each of these hubs is successfully handling large flows of connecting passengers, the dynamics of where people want to fly and why, and what is technically possible continue to change.

Just as the introduction of longer range aircraft types over the past 10-15 years allowed large flows of transpacific passengers to bypass Narita, and travel directly to North America and South East Asia, today, many of the major Asian hubs are seeing the share of traffic which connects decline, even if absolute volumes continue to rise.

For some hubs which rely on tourism, such as Bangkok, there is a risk that aircraft more suited to long thin routes will enable passengers to fly directly to their holiday destination, rather than via a hub.

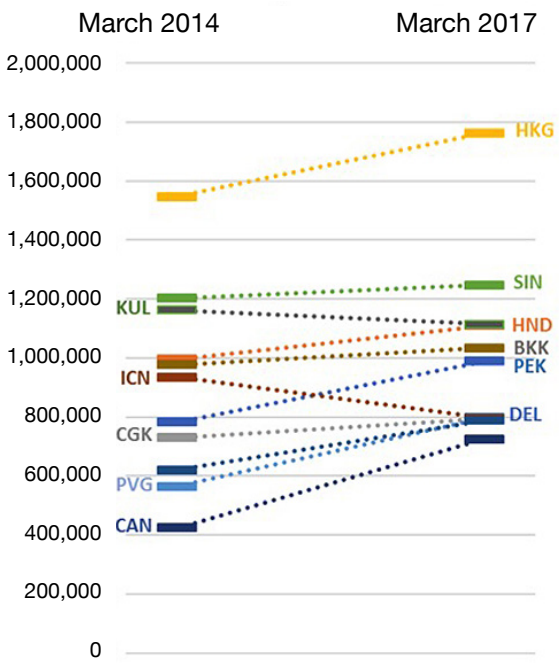
Asia hub share of traffic that is hub traffic – March 2017

Hub Airport	Mar-14	Mar-17
Hong Kong (HKG)	30.3%	30.7%
Singapore (SIN)	25.9%	24.8%
Haneda (HND)	19.1%	18.0%
Kuala Lumpur (KUL)	26.4%	24.0%
Bangkok (BKK)	24.8%	21.4%
Beijing (BJS)	10.9%	12.4%
Jakarta (CGK)	14.4%	12.3%
Guangzhou (CAN)	9.6%	14.1%
Shanghai (PVG)	13.5%	14.8%
Incheon (ICN	24.9%	16.2%
Delhi (DEL)	19.0%	16.5%

Source: OAG traffic analyser

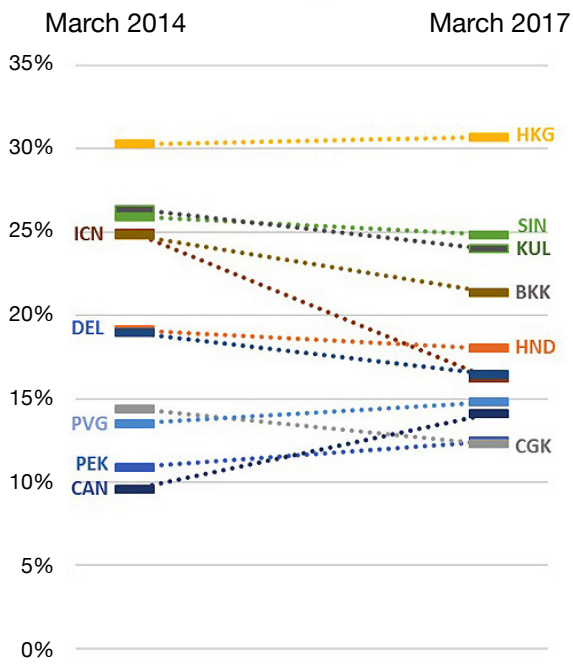
A snapshot from three years ago compared with a recent month shows how things are changing. The volume of connecting traffic at both Kuala Lumpur and Incheon has declined while Singapore, Haneda, Bangkok and Jakarta have seen moderate increases. Hong Kong, with the largest hub flows, has grown substantially, as have Beijing, Shanghai, Guangzhou and Delhi.

Trends in volume of connecting traffic at hub airports



Source: OAG traffic analyser

Trends in proportion of connecting traffic at hub airports



When the volumes of connecting passengers are translated into the share of overall traffic, a more interesting pattern emerges. All the major hubs discussed above are seeing their share of connecting traffic erode, with the exception of Hong Kong, which has seen a small gain. The striking observation is that the three Chinese hubs airport, Beijing, Shanghai and Guangzhou, are increasing the proportion of traffic which is using the airport as a connecting point. While only 12-15% of passengers are using these airports as a hub now, a continuation of these trends will see these airports connect as many passengers as the older hubs in a matter of years.

This points to a future where the massive outbound Chinese market, almost certainly with a preference for connecting at a Chinese airport before flying internationally, will potentially leave the other hubs in Asia increasingly dependent on O&D traffic. Hong Kong, and Cathay Pacific in particular, is clearly gearing up for that future by focussing on traffic to and from China and facilitating the needs of Chinese connecting passengers. Singapore, too, has worked out that its geography means it can build non-Chinese markets. The strategy of the other Asian hubs in the face of the boom in Chinese travel is less clear.

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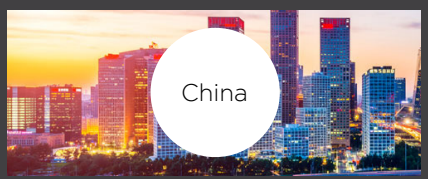

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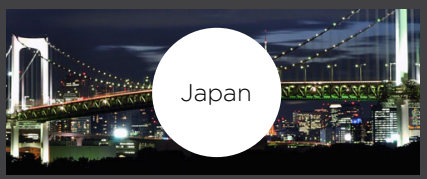

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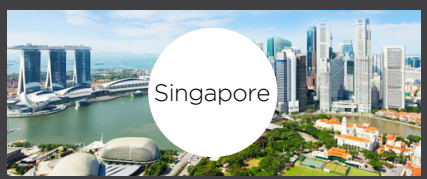

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