



WHY A NEW THIRD RUNWAY AT THE AIRPORT WILL OFFER LITTLE BENEFIT TO HONG KONG

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Kai Tak, Hong Kong's first international airport, had a fearsome reputation. Nestled on the western side of Kowloon bay and just south of significant mountains, an approach to the South-Easterly runway was not for the faint-hearted and many airlines entrusted the task only to Captains.

Known to regular flyers as the 'Kai Tak Heart Attack', an instrument approach guided aircraft directly towards Lion's Rock, the procedure demanding a 50 degree turn at low level to seemingly glide between residential towers and onto the tarmac. Another few minutes straight ahead and the cockpit would come alive with flashing lights and beepers going off for imminent terrain contact.

Whilst an aircraft spotter's dream, the location had very real limitations including no ability to land in low visibility in one direction. This necessitated a move to its current location, Chek Lap Kok, where a pair of parallel runways clear of obstructions and terrain allow the most limiting of approaches and in almost any weather condition.

But Hong Kong International Airport (HKIA), once considered as having ample capacity, has since become dwarfed by concrete monsters like Amsterdam Schiphol and Chicago O'Hare, where upwards of five runways allow more than one hundred aircraft to land every hour. Movements, which describe both take offs and landings, measure the pulse of high-performing airports. They indicate efficiency, capacity, and effects of delays, but are eventually limited by the fairly reasonable safety precaution that aircraft can only be packed so close together until they become a hazard. In most cases, this actually means 3 nautical miles on the final approach – which, although safe, leaves little room for mistakes or a myriad of real-world contingencies.

In 2008, the Airport Authority Hong Kong (AAHK) decided it was time to expand and commissioned a series of reports to draw up a 'masterplan' for the airport.

The UK's National Air Traffic Services (NATS) was asked to investigate ways of further developing the airport. The two phases of reports made recommendations for Air Traffic Control (ATC) operational improvements and investigated airport designs. Starting with 16 options, these were eventually narrowed down to three possible ones, all of which represented variations on a third parallel runway. NATS identified that, staying with the current architecture, HKIA would be constrained to 68 movements per hour, but by adding a third runway this could increase overall movement capacity to over one hundred.

However, pinning down the exact financial benefit is tricky – measuring direct and even indirect revenue made by the airlines and airport business may be straightforward, but the subject soon becomes muddy when extrapolating value added by tourism, trade and business development.

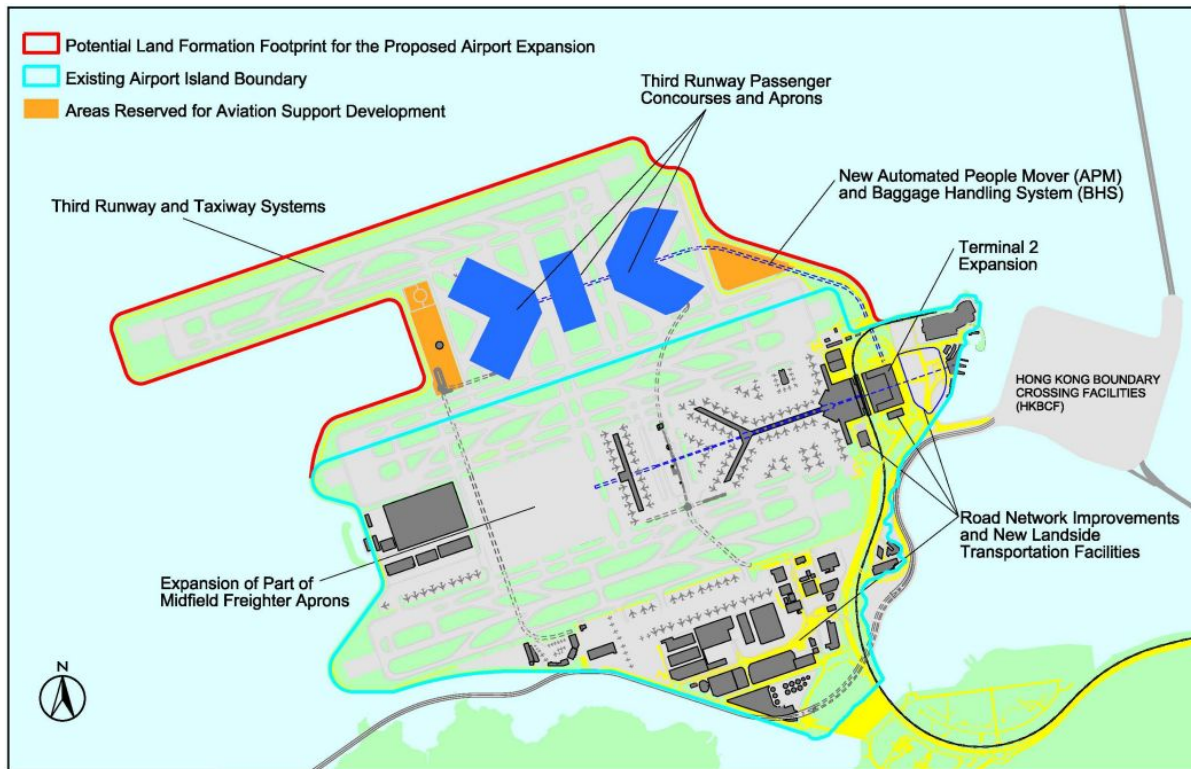
An economic impact study commissioned by HKIA made the most complete assessment and found that the combined direct, indirect, and induced value-added impact of aviation-related businesses in Hong Kong and non-aviation businesses at HKIA was HK\$77,587 million in 2008, equivalent to 4.6 percent of Hong Kong's GDP. The study then modelled three scenarios including maintaining the status quo, optimisation of the two runway system and building of a third runway. The status quo remained competitive until 2015 whilst optimisation becomes constrained by projected demand in 2020. The third runway system was forecast to increase value-added by HK\$167,472 million and maintain its present contribution to the GDP..

City states are uniquely bonded to aviation and none more so than Hong Kong, whose history has been so much augmented by air travel. Too often though, construction and bolstering infrastructure seem to be ready answers offered up a little too freely. There is no doubt that development of the airport would add to its capacity, but movements don't necessarily represent the full picture.

Compared to even a couple of decades ago, modern aircraft are able to carry phenomenal numbers of passengers and cargo, yet the International Air Transport Association recently found that, in the year leading up to April, Asia-Pacific passenger aircraft were flying at an average load factor of 77.3% – that means more than a staggering fifth of seats are going empty. That's not to mention that between 2am and 6am, an average of only 9 aircraft depart from HKIA every hour. If airlines, or more precisely, paying customers were prepared to put up with anti-social timings, then capacity between these hours could almost treble.

During daylight, a third runway may allow for more movements, but whether these could be utilised is another matter. Airspace around Hong Kong is unique in being restricted by Chinese airspace to the North, both in terms of space and its vulnerability to mainland delays and air traffic flow control.

In June, FlightStats reported that HKIA had placed 37th out of all 'global-hub airports' with 34% of all flights experiencing delays longer than 15 minutes. Many were attributable to knock-on delays from the mainland, circumstances which Hong Kong's ATC can do very little about and which have the potential to choke an airport, especially if movements were to increase by another 50%. Airlines may choose to reroute and avoid Chinese airspace but, for many destinations, the cost implication would be severe.



Still, there is a bigger question concerning Hong Kong's middle-distant future. The Greater Pearl River Delta region presently has five international airports: Guangzhou, Hong Kong, Macau, Shenzhen and Zhuhai. Last year more than 173 million passengers found themselves passing through one of these airports and even more can be expected as the area grows.

Over the next six years, rail and road infrastructure projects will begin unifying this area under the cunningly-named "Turn The Pearl River Delta Into One" scheme, creating a super-city 26 times the size of Greater London. In this context, it seems doubtful that, geographically speaking, Hong Kong would be a preferred port of entry for this super-city, making any expansion of its airport unnecessary.

Whatever the future holds for Hong Kong, there's a general feeling amongst the aviation community that this extra runway will add little benefit. Delays in June averaged 62 minutes – without addressing the direct causes by relaxing Chinese airspace and making significant changes to the ATC environment, this runway will find itself redundant. Air travel was once indispensable to Hong Kong. It lubricated trade and pumped life into business, but its importance is proportional to the territory's isolation. Times have changed. If money must be pumped into construction, it would be better spent establishing stronger links to the mainland – where the future, for better or worse, must lie.

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