# ANALYSIS: CHANGI'S T4 A JIGSAW PIECE TO A BIGGER PICTURE

**News / Airports / Routes**

**When Singapore's Changi Airport announced plans for a fourth terminal in March 2012, to replace its six-year old Budget Terminal, the reception was mixed. The same sentiment lingers a year before Terminal 4 is set to begin operations, in mid-2017.**

Analysts question T4's effectiveness to complement the wider Changi airport and its facilities, especially with its lack of a monorail connecting it to the airport's other three terminals. T4 will be connected only via bus links on the air and land side. Infrastructure issues would make a monorail prohibitively expensive.

Shukor Yusof, founder of aviation advisory firm Endau Analytics, says the bus links "do not do justice to the project and make T4 seem like a standalone terminal".

He questions Changi's ability to fully cope with just bus services when T4 reaches its estimated handling capacity of 16 million: "It will do Changi no favours when passengers start to complain. It is better to put in all the bells and whistles now than to add them as an afterthought."

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On reasons for not being able to construct a monorail line, Changielaborates: “With the [aircraft] bridges spanning across Airport Boulevard and services buried underground along Airport Boulevard, it will be extremely challenging technically to build the tracks either above ground or underground for a Skytrain connection between T4 and the existing terminals.”

Meanwhile, Timothy Ross, head of transport research for Asia Pacific at Credit Suisse, believes T4 will be launched with a disadvantage, but is confident Changi “will be able to make the necessary adjustments to make transfers seamless”.

Ross believes there could be a reason for T4’s infrastructure differences compared to the other terminals: “As it is, regional low-cost carriers and legacy carriers operating [at T4] have little or no need to move passengers between terminals. Singapore is the final stop.”

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Changi's T3 is linked by monorail to T1 and T2, but planned reliance on a bus service for T4 has raised concerns

Changi airport

Even Singapore's Senior Minister of State for Transport Josephine Teo, acknowledges "the new scale of Changi requires [all stakeholders] to think differently". In a recent speech, she said lessons from "previous experiences remain relevant and important. One is that good infrastructure is essential, and it is hard to modify infrastructure once a design has been pinned down. That is why we are careful not to rush the design process".

However Changi's senior vice president of market development, Lim Ching Kiat defends the airport's decision, saying the lack of monorail connectivity will not impact T4's standards of service. "Our bus links will make it on par with the other terminals. We hold passenger service dearly as one of our major priorities and will endeavour to make a smooth transport process."

**Changi can never be full**

Changi says its three other terminals are running at 80% of their design capacity of 66 million passenger movements per annum. As such, Lim says T4's operational date "comes at a very opportune time."

Ross elaborates, once an airport reaches 70% of capacity utilisation, it needs to start building new terminals to prevent overcrowding. "T4, as with the upcoming T5, is Changi's way of 'futureproofing' Singapore. This means they are building assets with a long shelf-life to ensure high utilisation rates in the time ahead. For Changi to remain successful and be ahead of its competition, it has to keep building ahead of demand – Changi can never be full."

Meanwhile, Yusof is confident of the Singapore government's ability to plan for the future, with Changi as a key focus of growth. "[Singapore] does not look at growth in the next 10 to 20 years, but instead, at least, for the next 35 to 50 years."

Furthermore, with the population in the Southeast Asian region set to grow by around 605 million by 2020, coupled with the surge in the middle class, it suggests the constructions of T4 and T5 are prescient.

Lim says Changi is aware of the booming aviation industry in neighbouring countries and is mindful of ever-increasing competition in the region. However, he adds that one way Changi is staying ahead of the game is growing its network to Tier 2 and Tier 3 destinations, whilst growing its core markets. "No two airports have the same catchment area. We intend to capture the Intra-Asia Pacific traffic by punching deeper into large countries like China and India."

He cites upcoming and recent connections to Fiji (via Fiji Airways in April 2016) and Uzbekistan (via Uzbekistan Airways in April 2014) as examples of Changi's expansion into Tier 2 and 3 destinations. "We are simply planting seeds for tomorrow – we may not see high yield today, but they might achieve it one day."

Six airlines, Cathay Pacific, AirAsia, Indonesia AirAsia, Thai AirAsia, Korean Air and Vietnam Airlines will operate out T4, which has 21 contact stands: 17 for narrowbody aircraft, four for widebodies. According to Changi, these carriers operate 800 flights weekly and collectively amount for about seven million passenger movements.

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Between eight and 10 million passenger movements are expected in the first year of operations. “With more than 50% of design remaining, T4 airlines riding on the rapid growth in the region will have abundant headroom to expand,” says a spokesperson. Changi adds T4 airlines will link the airport with 19 destinations, mainly in Southeast Asia and East Asia.

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T4 will be a testbed for automated operations, including all-self-service check-in

Changi airport

**Budget Terminal not a mistake**

When Singapore's former Budget Terminal closed in September 2012, it had a capacity of seven million and handled 4.6 million passengers in 2011. The operators using the terminal were Tigerair, Firefly, Cebu Pacific, and Malaysian charter carrier Berjaya Air and Seair, Cebgo’s

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predecessor.

The Budget Terminal was a far cry from the other three terminals, with their elaborate design features such as a butterfly garden, movie theatre, and swimming pool – not to mention high-end shops. It featured basic food and shopping options and would at best be described as functional. Lacking aerobridges, passengers were obliged to walk across the tarmac to board jets, rain or shine but it was simple and efficient, and generally popular.

“The Budget Terminal was not a mistake," says Lim. "But Changi has taken the lessons learnt and implemented them onto the construction of T4, which represents a window of opportunity to add more capacity via an infrastructure that is aligned with the rest of the airport.”

He adds T4 will have the same landing charges and user fees as T1, T2 and T3. When queried about future landing charges for the upcoming T5 project, Lim declined to comment.

With half of T4’s operating carriers low-cost operations (AirAsia, Thai AirAsiaand Indonesia AirAsia), Lim says Changi has acknowledged “many of [its] new links are brought about from LCCs [low-cost carriers]” and their task “is to keep costs low to grow new routes, not just for them but also for full-service carriers that enhance [its] long-haul connectivity."

In addition, Lim tells Flightglobal, in light of manpower constraints, T4 will be a “testbed for new technology and processes” before it is effectively rolled out across Changi. One such major new technology is the use of automation. T4 will also be the airport’s first all-self-service check-in terminal.

This is a major change. Changi's three terminals are manpower intensive. Automated check-in options are limited, and it is impossible to print a boarding pass at home. Even passengers who use an automated check-in machine must have their documents checked by an airline staffer before proceeding to immigration.

There are automated passport scanning machines for departing passengers that reconcile the passport with the passenger's thumbprint, but the passport and boarding pass need to be again checked by a security guard – this despite a passport/boarding pass check immediately before the immigration area. The existing terminals' practice of screening passengers only when they reach the gate also generates demand for more security personnel – although T4 will reconcile this with central security.

Overall, a departing passenger's documents are checked six times from check-in to stepping on the aircraft. It would appear Singapore's leadership, with its recent emphasis on improving local productivity, is eager to find ways to change this.

Another aspect of T1 and T2 that infuriates some unfortunate arrivals are ad hoc post-flight security checks for randomly selected flights, which scrutinise Singapore residents returning home and transit passengers alike. The checks are very manpower intensive and deeply unpopular.

**Productivity focus**

“Singapore’s resident workforce growth has slowed and may level off in a few years. This means Changi's workforce cannot simply be doubled to match our capacity expansion. Changi's future operations must therefore not be “business as usual” on the manpower front. We will have to fundamentally rethink how we harness the enthusiasm and abilities of all our people so they can be highly skilful in what they do and enable a highly productive work environment in the entire

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aviation sector," says Senior Minister Teo.

Changi also looks for ASEAN Open Skies to give it a boost, although a single aviation market for the region remains elusive, owing to domestic resistance in key markets like Indonesia and the Philippines.

"There are few routes that airlines want to fly to, but are prevented. That said, more liberalisation at other airports definitely benefits us," adds Lim. In turn, Changi is working with authorities to liberalise the visa requirements of certain countries.

In the near term, Changi intends to expand its co-operation with key regional airline partners to improve their network amid a low-priced oil market. "We are seeing more appetite for risk from airlines lately to fly to new, further destinations. And we expect to be in a good position in the next one to two years."

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