



A tale of two airports

Dr John Kasarda reports on the impressive recovery of Belo Horizonte's Tancredo Neves Airport, and how it went from a traffic nadir to a thriving international gateway.

It's an increasingly common story – an older commercial airport located near to the city centre reaches saturation with limited or no prospects for expansion.

Based on traffic forecasts, a new state-of-the-art airport is built on the periphery of the metropolitan area with considerable expansion capacity, but with far greater travel time between the airport and the urban centre.

What should be done with the old airport? If it is kept open, how should routes be distributed between the two airports?

In many cases, the older airport is simply closed with all flights transferred to the new peripheral airport. In others, the older city airport remains open, ostensibly as a domestic facility, but manages to compete effectively by retaining, and often winning, new passengers and by doing so stifling the growth of the new airport. As is usually the case, accessibility and convenience trump modern facilities.

The latter was the case at Belo Horizonte in Brazil, with major consequences for passengers, cargo and route development at the new airport but also its anticipated surrounding economic development.

This story has a happy and quite remarkable ending for the new airport, but it took tough decisions on route redistribution and major land-based infrastructure investment for this to occur. Let me explain.

Pampulha and Confins

Pampulha's Carlos Drummond de Andrade Airport, located 8km from downtown Belo Horizonte, opened in 1933 as a support facility for the Brazilian Air Force and became the city's commercial gateway in 1936 when Panair do Brasil launched a flight between Belo Horizonte and Rio de Janeiro.

Pampulha's traffic expanded substantially in the latter part of the 20th Century in tandem with the growth of Belo Horizonte – the capital of the State of Minas Gerais – and Brazil's third largest metropolitan area, containing 5.2 million residents.

By the 1970s, Pampulha had reached capacity. While periodic facility upgrades occurred, it was cramped and outdated by emerging airport standards. Its single runway had no parallel taxiway and with



Belo Horizonte's urban expansion surrounding the airport ruling out further infrastructure development.

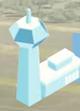
There was no option but to construct a new airport. The site selected was Confins, a semi-rural municipality on the northern periphery of the metropolitan area, 38km north of Belo Horizonte.

The airport opened in 1984 as Brazil's most modern aerodrome, with a terminal equipped to handle five million passengers. Known for decades simply as Confins, the airport was formally renamed Tancredo Neves International Airport (TNIA) in 1986 after the former Brazil President. Like Pampulha, TNIA was operated by government airport agency, Infraero.

Early forecasts showed that TNIA would be handling up to 20 million passengers by 2020, many of them international. The original design therefore called for two long-range runways and four 300,000sqm passenger terminals to meet forecast demands.

The problem was that for 20 years after TNIA's opening, the passengers didn't arrive.

By 2004, the airport was handling under 400,000 passengers per annum. In fact 10 years after opening, the new airport actually began to shrink while Pampulha's traffic skyrocketed.



Between 1994 and 2004, Pampulha's passenger volume grew from 735,010 to 3,194,715 (nearly four times official capacity) creating chaotic conditions. During this same 10-year period, TNIA's passenger volume plummeted from 900,476 to 388,580 – only 19% of its single terminal's capacity.

TNIA's biggest challenge, as noted, was accessibility – 38km from downtown was no match for Pampulha's 8km. Moreover, the narrow, winding roadway through the hills from Belo Horizonte to TNIA was congested with dangerous intersections.

This frequently made the trip from the centre to the new airport more than 90 minutes with a taxi ride costing more than \$40. TNIA's time-cost accessibility was simply too high to compete against Pampulha, despite its state-of-the-art facilities and the old airport's constraints.

Bold recovery

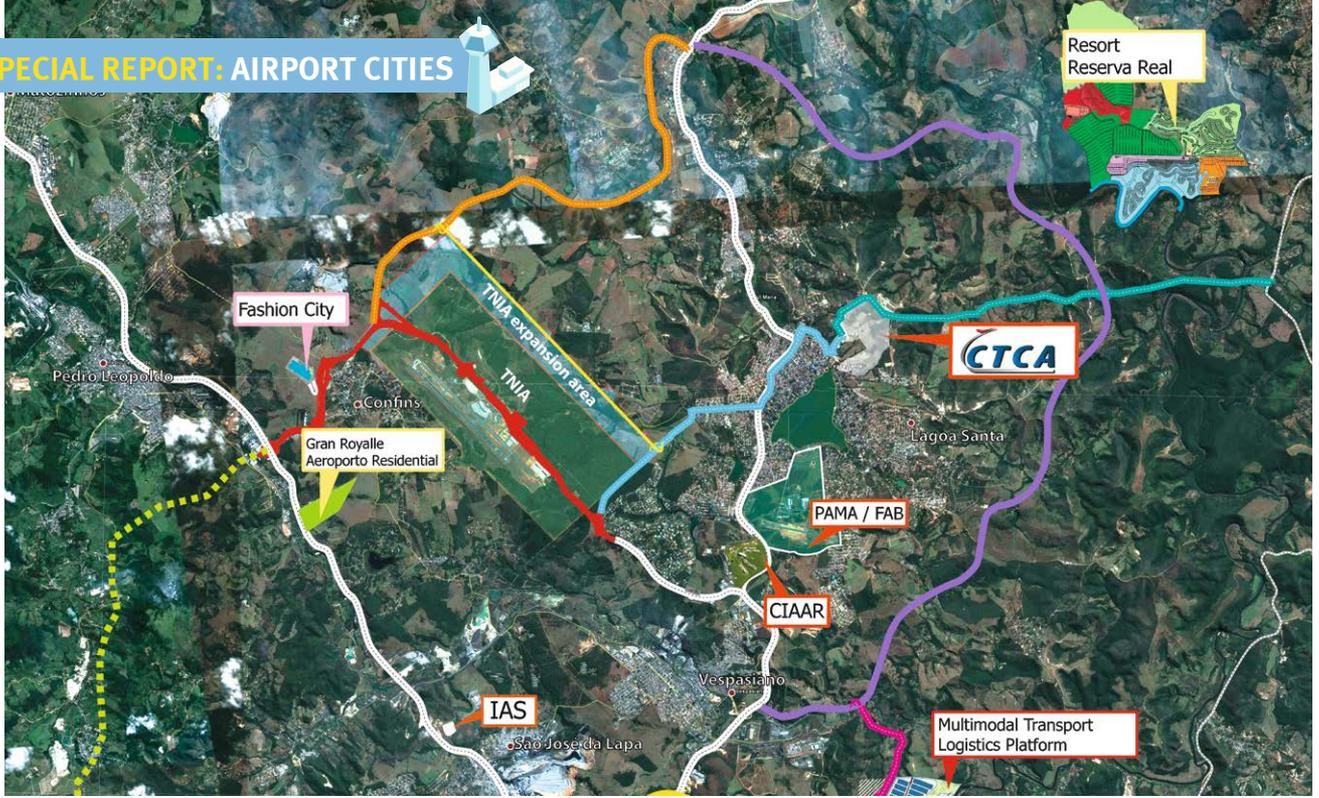
It became clear to federal and state agencies that if TNIA's poor surface accessibility was not addressed the airport might forever be labelled a 'white elephant'. All hopes for it becoming Belo Horizonte's 21st Century engine for economic development would be dashed.

Led by the Minas Gerais State Secretariat for Economic Development, huge investments commenced in 2005, upgrading the 18km segment of TNIA's highway into the downtown, making it a limited access four-lane expressway, starting near the airport.

Other upgrades were made along this corridor called Linha Verde (Green Line) closer to Belo Horizonte along with improving airport area access roads. Within three years, travel time from downtown to the airport was cut nearly in half.

A related accessibility challenge is being met by the development of a new northern metropolitan ring road that will connect the TNIA area to many of Belo Horizonte's time-critical businesses and industries that are located at the opposite side of the metropolitan area. Expressways are also being built to major economic clusters that will form the backbone of the Belo Horizonte Aerotropolis (airport-integrated urban economic region).

An even bolder, yet equally critical, action was taken by the State of Minas Gerais and Infraero in March 2005. Legislation was enacted to restrict Pampulha Airport to aircraft with no more than 50 passengers.



This had the effect of shifting 130 daily flights from Pampulha to TNIA, immediately boosting the newer airport's passenger volume to approximately three million, almost a 10-fold increase.

TNIA's enhanced route structure had a reinforcing effect through transfers supporting more routes development, catalysing passenger growth. TNIA's passenger volumes accelerated, climbing to 5.6 million in 2009, 7.3 million in 2010, 9.5 million in 2011 and an estimated 11.5 million in 2012.

In 2011, TNIA became the second fastest growing airport in the world, just behind Brazil's Campinas-Viracopos International Airport, whose percentage increase was on a much lower base.

By late 2012, TNIA was serving 233 flights per day to 32 cities throughout Brazil. The airport also has five flights to four international destinations: two to Miami (American Airlines and TAM), one to Panama City (Copa Airlines), one to Lisbon (TAP Portugal) and another to Buenos Aires (GOL) via São Paulo. Pampulha itself has carved out a successful new niche as a regional airport for interstate flights to many of Minas Gerais' 90 regional airports and adjoining states. It also serves as a hub for corporate jets and other general aviation aircraft, meeting urban business community needs.

Economic impact

As strategic decisions were being implemented to substantially upgrade TNIA's surface connectivity and concentrate all major commercial flights at the newer airport, other strategic decisions were taken to attract industry, foster business development, and create jobs at and outward from TNIA. These included Minas Gerais government officials working with the Federal Ministry of Finance, Brazil Customs and Infraero to establish special economic zones at TNIA making it Brazil's first airport to activate the country's new industrial airport policies.

Firms locating in these special economic zones receive tax relief, customs facilitation, and other business advantages. The state, through its Secretariat for Economic Development, recruited Brazil's largest airline, GOL, to set up a major maintenance repair and overall facility at TNIA, creating 1,100 well-paying jobs.

At the same time, virtually all state government jobs were relocated to an architecturally spectacular Administrative City constructed along the Green Line to TNIA. More than 16,000 people are currently employed there, with further commercial development evolving around it. The Administrative City is part of a broader Belo Horizonte Aerotropolis plan that covers a radius of 20km around TNIA. Aerospace is a major target with an expansive aerospace training and technology center (CTCA) being developed in Lagoa Santa about 6km from the airport where Embraer is locating its engineering research facility.

Local universities are also co-operating with the National Civil Aviation Agency to provide pilots and university students with advanced aeronautical training facilities, and aircraft component manufacturers are being solicited.

Approximately 8km south of the airport, a major multi-modal logistics platform is under development. North of the airport, IBM is partnering with five other entities to construct a \$500 million semiconductor production facility that will be the most modern in the southern hemisphere.

A high-tech aerotropolis corridor is also in the works, and this will constitute the spine for other microelectronics, biotechnology, and time-critical industries that benefit from airport access.

Most of this development would not have taken place without the strategic vision and bold actions of Minas Gerais State government officials in partnership with others to make TNIA far better connected by surface and by air.

State officials are working diligently to intensify service on existing routes and foster new domestic and international routes. In the process they are demonstrating that connectivity drives competitiveness and corresponding economic development – a remarkable achievement indeed.

AW

About the author

Dr John Kasarda is director of the Center for Air Commerce at the University of North Carolina and CEO of Aerotropolis Business Concepts, LLC. He can be contacted by email at johndkas@hotmail.com.