Eastern promise still beckons

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Beyond new terminals and runways at major hubs, there is a strong tempo of airport development throughout Asia. *Marisa Garcia, Mainbayar Badarch, Steven Gilmore, and Ben Vogel report*

The Asia-Pacific region remains a major engine of growth for global aviation. IATA predicts that China, India, and Indonesia will be among the five largest domestic markets by 2036. By then, an extra 2.1 billion passenger journeys per year will be made to, from, and within Asia-Pacific for an overall market size of 3.5 billion.

Especially fast growth is predicted for China, India, Indonesia, and Vietnam, but an urgent need to ensure adequate airport capacity also applies in other Asia-Pacific countries.

ANA B-787 taking off from Narita International Airport. The Japanese airport is gearing up for an influx of visitors during the 2020 Olympics. (Getty Images)

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Japan, for example, is predicted by IATA to be the seventh-largest aviation market in the world by 2036, and the tempo of airport upgrades there is influenced by the impending 2020 Olympic Games in Tokyo.

Narita International Airport will be at the forefront of welcoming visitors to Japan, as millions of extra passengers are expected for the Olympics. The airport – which is celebrating its 40th birthday this year – is also committed to helping Japan meet a government target of boosting inbound tourism to

60 million by 2030. This would represent more than double the 28 million welcomed in 2017, and a steep increase from 2010 when 8.6 million foreign tourists arrived in Japan.

Narita served almost 41 million passengers in 2017, with 97 international airlines connecting to 111 destinations in 38 countries around the world. Most international passengers (72%) come from Asia. Hideharu Miyamoto, vice-president of corporate strategies and planning at Narita International Airport Corporation (NAA), described an aggressive growth plan when speaking to the press during the 2017 IATA Annual General Meeting in Cancun.

"The expansion of the airport is very important project in Japan, especially in the greater Tokyo region," he said, adding that NAA was engaging the local community on further expansion. This plan includes construction of a new third runway (called Runway C); extending the shorter 2,500 m Runway B by 1,000 m; and easing the night curfew at Narita. Instead of no operations from 2300 h to 0600 h, NAA wanted to put restrictions between 0100 h and 0500 h. "It used to be that we major opposition from the local community, but now the situation is very changed. They are very positive about our improvement plans," Miyamoto argued.

Community engagement paid off, due in part to the national focus on making Tokyo more tourist-friendly and attracting more visitors to Japan. NAA obtained approval in March 2018 to build the 3,500 m Runway C and extend Runway B to accommodate larger aircraft. NAA also received the green light to operate from 0500 h to 0030 h once Runway C is completed. The third runway will be completed by 2028 on the east side of the airport. It will enable Narita to handle 460,000 aircraft movements per year, compared with 300,000 today.

Scaling up capacity and adding new infrastructure brings specific operational challenges, which NAA is addressing with technology. On-time performance is one essential area that the airport operator wants to improve: today 80% of flights depart punctually but NAA wants to improve this to 85-90%.

"We believe that achieving high quality on-time performance is an essential aspect to transport service and is second only to safety," Ryoichi Ishihara, NAA senior manager, said in March 2018 during Passenger Terminal Expo in Stockholm.

Several factors behind this key performance indicator lie outside the purview of NAA, as air traffic control and airline operational issues have a direct effect on flight punctuality. NAA is therefore focusing on factors it can control inside the terminals at Narita. Ishihara specifically mentioned that NAA will deploy "cutting-edge information and communication technology" to improve passenger flow and wayfinding to departure gates. The result is the Smart Airport Concept, which aims to make Narita easier to navigate for people from around the world with multi-language support, as well as to accommodate people of all ages and the disabled by applying universal design principles.

"International airports are being used every day by large numbers of people from various backgrounds [language, culture and custom], seasoned travellers and first-timers, young and old people," said NAA senior manager Hidetaka Abe. "Passengers with these diverse backgrounds, arriving at an airport in an unfamiliar country and making their way to their final destination, are challenging both physically and psychologically."

Narita offers touchscreen information displays that offer wayfinding information to airport services and shops. The screens also allow passengers to find their gate on a terminal map by scanning their boarding passes, and customer service personnel can help via videophone when needed. The airport has installed 1,304 beacons in the terminals to support way-finding accuracy. The light-

charged beacons are located near overhead lights to keep the batteries full. Beacons also support accurate mapping for passengers who download the NariNAVI app on their smartphones.

Narita has also tested a robot airport assistant HOSPI, developed with Panasonic. One recent addition that fits the theme of promoting tourism is the TABIMORI (Travel Amulet) hospitality app, which guides visitors to Japan with a host of features including cultural guides, transfer information at Narita, and speech translation to and from nine languages.

To demonstrate that Japanese airport designers think of almost everything, 86 lavatory cubicles at Narita have been fitted with dispensers for tissues to clean smartphones. Similar in design to toilet paper holders, the tissue bears the message "Welcome to Japan" and is designed to clean mobile phone screens.

As reported by *Jane's* , Narita is eager to accelerate passenger flow through its security checkpoints. The airport trialled checkpoint computed tomography (CT) systems earlier in 2018. Original equipment manufacturers involved in the live operational tests included Analogic (with its ConneCT system) and IDSS (DETECT 1000). Security managers from other Asian airports (such as Bangkok Suvarnabhumi, Hong Kong, and Kansai), attended these trials.

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