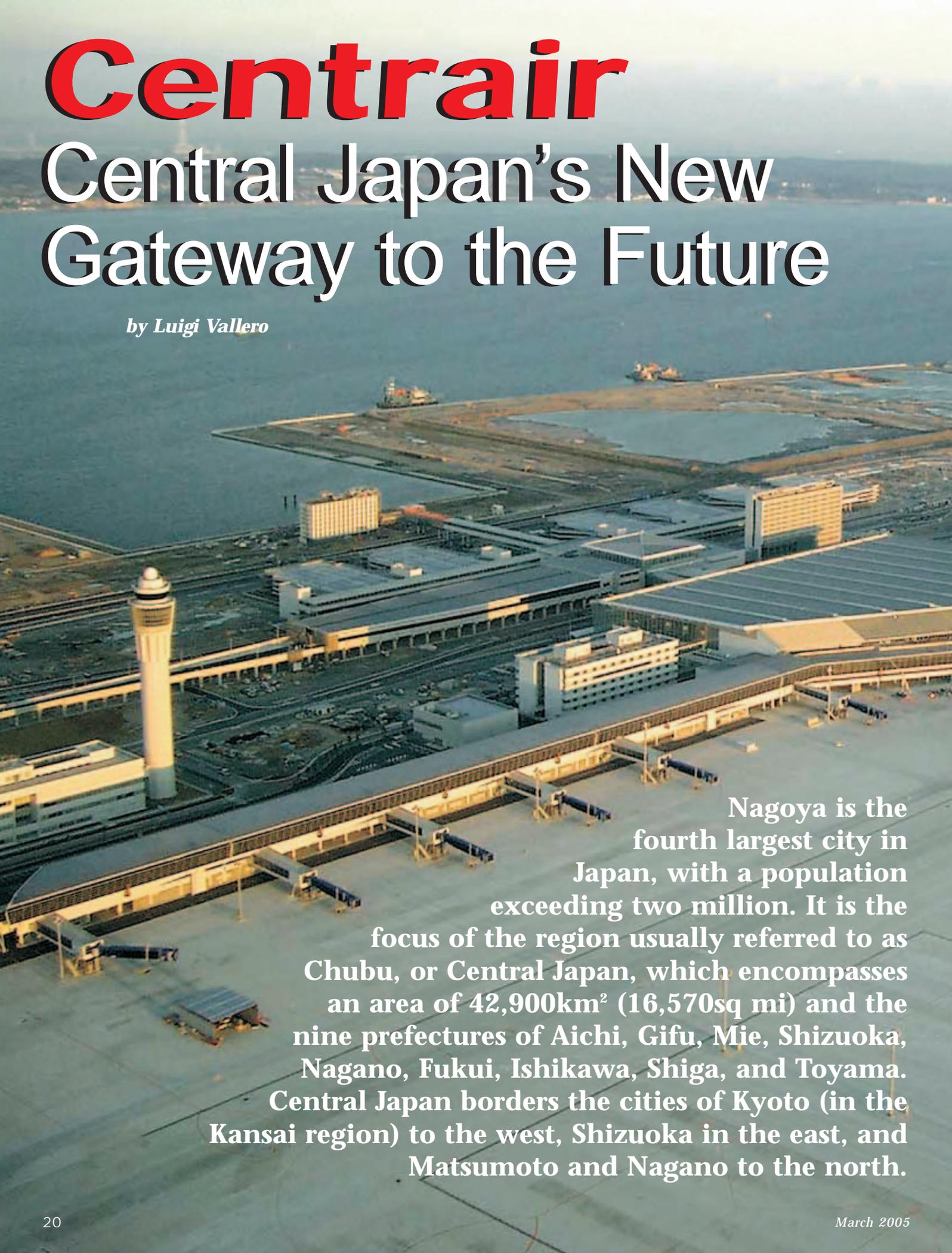


Centrair

Central Japan's New Gateway to the Future

by Luigi Vallero

An aerial photograph of the Nagoya Centrair International Airport terminal and surrounding infrastructure. The terminal is a long, modern building with a glass facade and a prominent white tower. The airport is situated on a large, flat area with various buildings and parking lots. In the background, there is a large body of water, likely the Ise Bay, with some ships and a large island visible. The sky is clear and blue.

Nagoya is the fourth largest city in Japan, with a population exceeding two million. It is the focus of the region usually referred to as Chubu, or Central Japan, which encompasses an area of 42,900km² (16,570sq mi) and the nine prefectures of Aichi, Gifu, Mie, Shizuoka, Nagano, Fukui, Ishikawa, Shiga, and Toyama. Central Japan borders the cities of Kyoto (in the Kansai region) to the west, Shizuoka in the east, and Matsumoto and Nagano to the north.



The entire Chubu region, home to more than 20 million people, accounts for almost one-quarter of all product shipments in Japan. It has always played an important rôle in Japanese industry, being home to such iconic Japanese corporations as Toyota, Suzuki, Brother Industries, Epson, Yamaha, and Noritake. Chubu also boasts a rich natural legacy, which includes the Japan Alps, and is within easy access of key Japanese tourist attractions like Kyoto, Nara, and Mt Fuji.

Thus far, business travellers and tourists visiting the region had the choice of using Nagoya's Komaki International Airport (IATA: NGO/ICAO: RJNN), or flying to Osaka or Tokyo, 178km (111mi) and 318km (198mi) from Komaki, respectively, then commuting by Shinkansen SuperExpress trains to their final destination.

Komaki, despite its relatively modern and functional terminal, has struggled to cope with more than 11 million passengers annually, and consequently began showing its age. Besides, being surrounded by residential and industrial areas, it precluded any expansion, while a nightly curfew jeopardized efficient utilization of the airport by freight carriers.

With a good network to Asia/Pacific destinations from Komaki but very limited intercontinental services, traffic data showed that only 57% of total international business passengers from Central Japan were using the airport as their departure gateway, with 34% travelling to Tokyo-Narita and 8% using Osaka-Kansai. The only prospect of an effective solution was development of an entirely new airport to serve the region. But, in Japan, vacant space is at a premium, and available land is very scarce. The only alternative, therefore, was to construct an off-shore airport, as had already been achieved at Osaka-Kansai (IATA: KIX/ICAO: RJBB—*Airways*, Nov/Dec 1997), which has the distinction of being the first Japanese airport built entirely on a man-made island.

Accordingly, a company was established on May 1, 1998, with the aim of developing the new Central Japan International Airport (alternatively known as 'Centrair', or Chubu Centrair International Airport) and supporting infrastructure. Shareholders in Central Japan International Airport Company were the Japanese government, the prefectural governments of Aichi, Gifu, and Mie, Nagoya's municipal government, and 961 private enterprises.

Rising from the waters of Ise Bay

The development project for the new Chubu Airport (as it was officially named at the beginning) involved the construction of an artificial island on Ise Bay, some 2km (1.2mi) offshore from the town of Tokoname, which is itself 39km (24mi) south of Nagoya. Careful selection of the area was important to avoid the land subsidence problems that plagued Kansai for many years. Indeed, that airport began to sink almost from the day it opened for service, requiring major engineering efforts to arrest the phenomenon.



Built at an estimated cost of ¥768 billion (\$7.5 billion), the new airport occupies an area of 470ha (1,160ac), with a single 3,500m (11,500ft)-long runway enabling unrestricted long-haul operations. Besides the airport's proximity to Nagoya, the waters of Ise Bay off the town of Tokoname are shallow, with an average depth of only 6m (20ft), and the seabed is firm. The ground beneath the section which was to accommodate the ramp was consolidated in order to accelerate land settlement before construction began on top of it. All the reclamation was therefore done in a way so that when the airport opened, the ground would be unlikely to subside any further.

The location and shape of the airport island were defined whilst taking into account the environment, so as to avoid, or



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minimize, any interference with local sea currents. To benefit marine life, natural stones and blocks have been piled on the slopes of the airport island's seawalls, and new seaweed beds established.

And, as far as aircraft noise is concerned, the offshore location should present the neighboring population with very low disturbance levels, because the noise footprint of aircraft landing and taking off will be mostly over water.

Future developments of the airport envisage a total of two 4,000 x 60m (13,123 x 197ft) parallel runways, and a total surface of around 700ha (1,740ac).

Work begins

Construction of the airport island started with revetment work in August 2000. The first phase, which defined the newly-created island contours, was completed in March 2001, and followed by the commencement of reclamation work. In keeping with a very tight and well-coordinated schedule, construction of the passenger terminal building began in January 2002 while reclamation work continued. When reclamation was completed at the end of February 2003, construction and paving of the runway began, followed soon afterward by the start of construction of the cargo terminal.

When *Airways* visited the construction site in November 2004, the passenger terminal building was almost complete, with internal layout works well underway in order to achieve the planned opening date of February 17, 2005, in time for the inauguration of Expo 2005 Aichi, due to take place in the Nagoya region from March 25 to September 25.

Since the inauguration of the project, all details of Centrair have been planned with passenger comfort and the maximum possible efficiency in mind, under ISO14001 compliance.



Capable of handling 12,000,000 passengers from its first day of operations, the passenger terminal is built on three levels and consists of a central area, from which originate three piers in the shape of an inverted 'T' housing the gates. This shape was chosen to minimize the walking distance for passengers to reach their gate. The entire structure extends for 1,030m (3,380ft) north to south, and 500m (1,640ft) from east to west. Known as the North and South Wings, the two lateral piers cater for domestic and international traffic, respectively, while the center pier will host both types of flights, with 'Swing Spots' allowing the flexibility to convert gates from one rôle to the other.

Twenty-two gates have loading bridges. Before reaching the gate, passengers and airport visitors alike have many

Attractions of Centrair

Travelling to the airport from Nagoya will take 28 minutes by a comfortable express train, with Kyoto and Shizuoka being only 74 and 101 minutes away, respectively. Approaching the airport by train, or by car via the airport access highway, passengers reach the aptly named 'Access Plaza', which is linked to the Marine Access Terminal, where fast regular ferries from the cities of Toba and Tsu are planned. The plaza also acts as the pivotal entry point for the airport. From there it is a short walk through the connecting corridors into the compact passenger check-in area, which houses seven service islands with 96 counters. Passengers arriving by train could easily use luggage carts between railway platform and terminal.



PHOTOS: CENTRAIR



opportunities to while away their time by taking a leisurely stroll through the pleasantly contemporary Japanese-designed and environmentally friendly terminal. The fourth floor, where the 'Sky Town' concessions and observation deck areas are located, is a themed-place with many pleasant diversions and distractions.

A 'World Entertainment' and 'Gourmet Zone' has aisles lined with sophisticated shops and restaurants offering global cuisine, while the 'International Market Zone' re-creates the vibrant atmosphere of a tent-covered bazaar, offering cafés and booths selling goods from all over the world. On the other side of Sky Town, a 'Tasty Japanese Food and Merchandise Zone' replicates the market atmosphere of a traditional Japanese town, with outlets selling local fare and traditional handicrafts.

A large part of Sky Town has been allocated to the 'Relaxation and Local Specialty Zone'. This is a first for Japanese airports, providing travellers with several types of relaxation



services in the *Kutsurogidokoro* category—including hot baths, massages, aesthetic treatments, nap spaces, barbers, and hairdressing saloons—plus locally renowned restaurants offering celebrated Japanese '*haute cuisine*'.

Notably, the great Japanese tradition of traditional *onsen* hot baths is available at the *Miya-no-Yu* area of the Relaxation Zone, which boasts the first traditional bath at a Japanese airport, fully equipped with large-size jacuzzi, hot- and cold-



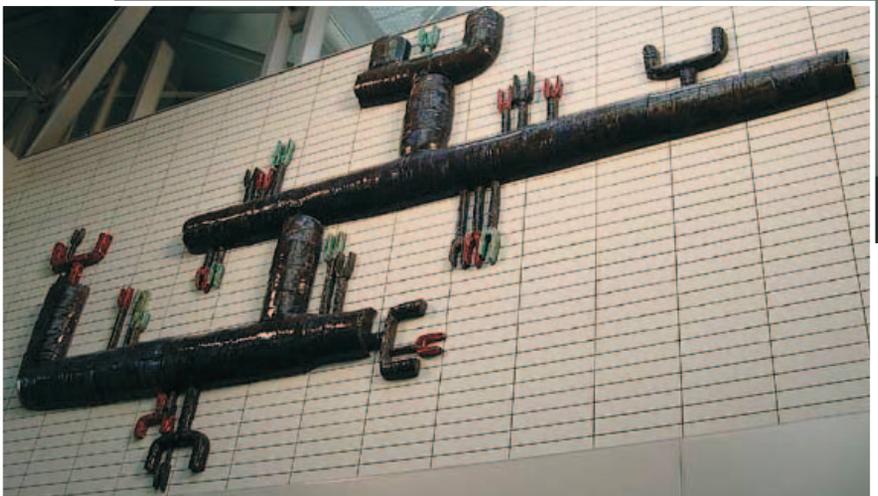
water bath and sauna, with the bonus of spectacular views of the aprons and Ise Bay.

In the middle of Sky Town, 'Center Plaza' serves as the venue for exotic events linking the traditions of the Orient with the Western world, and allows access to the observation deck. This spectators' area extends over the length of the center pier, affording close-up views of the aircraft apron against the panoramic backdrop of Ise Bay. The 'Atrium', a large indoor garden arranged on the first floor of this pier, provides a pleasant, stress-free environment away from the usual airport bustle, and is ideal for a relaxing stroll.

Arriving passengers are handled on the second floor, where all the standard amenities including nine baggage claim carousels are located, together with easy access to the Access Plaza for continuation of journeys by train, car, or ferry. The Centrair Hotel, located just outside the Access Plaza, offers overnight accommodations.

All the amenities throughout Centrair have been designed incorporating the principles of Universal Design for Barrier-Free Access. Therefore, as far as arrival and departure traffic is concerned, these are isolated on two self-contained levels, thereby eliminating the need for passengers to change levels, whilst ensuring security and convenience.

Large windows admit a great amount of natural light, while the use of local natural materials—including ceramic wall mosaics,



PHOTOS: CENTRAIR

plants, and wooden benches—together with a quintessentially Japanese style in the design patterns of the carpet and walls, give a warm feeling throughout the building.

A large car parking lot with a capacity for 4,000 vehicles helps reduce waiting

time and make it more convenient to find a parking space. It also has the potential for expansion to accommodate 6,000 cars if and when the demand arises.

Keeping an eye on Cargo

The Chubu region accounts for 29.2% of total industrial shipments in Japan, second only to the Kanto (Tokyo) region. Despite this, the volume of cargo handled through Nagoya-Komaki has so far accounted for only 12% of total exports for items manufactured in the region, and 25% of imports, the difference being handled through the airports of Narita and Kansai.

With an air cargo hub able to operate without interruption by curfews, Centrair will become one of the foremost such centers in Japan. In fact, Centrair is the fifth Japanese airport, alongside Haneda (Tokyo), Kansai (Osaka), New Chitose (Sapporo), and Naha (Okinawa), without a nocturnal curfew.

Two international warehouses have been planned, while an integrated bonded area is due to be established soon after the airport opens, handled by a corporate body focusing on streamlining of customs procedures. In this integrated bonded area, operations such as loading, disposal, storage, processing, and distribution of cargo can be undertaken before customs inspection, while the cargo remains in bond without imposition of duties or consumption taxes. Therefore, cargo delivery time and costs will be reduced, with the levying of duties and taxes suspended until the items leave the area.

Network development plans

At present, no airport in Japan can boast true domestic/international connectivity, not even at Tokyo (Narita or Haneda) and Osaka (Kansai and Itami), as traffic is effectively segregated. This often means that passengers must change between flights by switching from one airport to the other, involving an expensive, unwelcome, and long road journey. Centrair, however, has a single terminal combining international and domestic concourses into a compact floor plan, while the runway, one of the longest in Japan, enables fully laden wide-body aircraft to operate without takeoff performance constraints.

Interest in Centrair has already attracted a large number of airlines, which have announced new services. Apart from the current flights offered from Komaki, shortly after the airport's opening on February 17 American Airlines will begin a daily Boeing 777 service to Chicago O'Hare, Japan Airlines a daily 777 to Paris-CDG in cooperation with Air France, and United Airlines a daily service to San Francisco. These may be joined later by Varig to Los Angeles, São Paulo, and Rio de Janeiro.

Others keen to introduce routes from Centrair include KLM Royal Dutch Airlines and Austrian Airlines, while on the cargo side both FedEx and Nippon Cargo Airlines have already committed to start services to North America and Southeast Asia.

The current airport at Komaki will remain open for military use and airlines using aircraft with less than 60 seats. So far, only domestic operator J-Air, flying Bombardier CRJs on behalf of



CENTRAIR

Fast Facts— Chubu Centrair International

IATA: NGO	ICAO: RJGG
Location:	345130N/1364819E 35km (22mi) S of Nagoya City
Area:	470ha (1,161ac)
Elevation:	12ft (3.65m)
Runway:	18/36: 3,500m (11,483ft) x 60m (197ft)
Operator:	Central Japan International Airport Co (CJIAC)
Operation:	24 hours
Website:	www.cjiac.co.jp

Japan Airlines, has confirmed it will stay there, while NAL (Nakanihon Airline Service), operating Fokker 50s on commuter routes and code-sharing services with ANA, is expected to move to Centrair.

With the Expo 2005 Aichi and a brand-new unrestricted airport, Nagoya and Central Japan will be well poised to spread their collective wings and fly into the future. ✈

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