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Summit

Tony Tyler on
India

SUCCESS STORIES OF INDIAN

PPP

AIRPORTS



Success Stories of Indian PPP Airports

By Satyan Nayar, Secretary General
Association of Private Airport Operators (APAO)

The Civil Aviation sector is of national importance, contributing significantly to the process of economic development, enabling enhanced productivity and efficiency in the movement of goods and services by providing access to safe, secure, fast and affordable air services and world class airport infrastructure facilities. This sector also directly contributes to the GDP, generates employment directly, indirectly and induced, and gives fascinating opportunities to an array of industries such as Airports, Airlines, General Aviation, Cargo, MRO, Ground Handling, Air Navigation Services, Retail, Real Estate, Tourism, etc. There are

great opportunities and the future is even more exciting. The setting up of world class airport infrastructure facilities and offering a most modern and reliable air connectivity combined with integrated transportation connectivity holds the key.

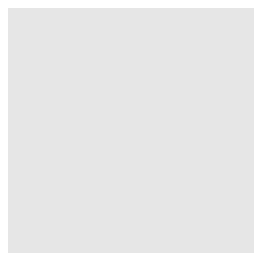
The vast geographical expanse and terrain of India makes air transport a necessity and not the luxury service as it is often perceived. Air transport is the fastest and safest mode of transport for relatively long distances. It is therefore critical that airport infrastructure gets developed in anticipation of meeting the future growth in demand for air travel. Therefore, well designed, efficiently operating, modern, world class airports are important national assets.



The traffic growth projected for the next 15 years will take us to the third position in the world as illustrated in the chart below:

2007			2012			2017			2027		
Rank	Country	Passengers (millions)	Rank	Country	Passengers (millions)	Rank	Country	Passengers (millions)	Rank	Country	Passengers (millions)
1	United States	1,450	1	United States	1,552	1	United States	1,790	1	United States	2,345
2	China	297	2	China	497	2	China	792	2	China	1,708
3	United Kingdom	243	3	United Kingdom	282	3	United Kingdom	324	3	India	581
4	Spain	210	4	Spain	251	4	Spain	294	4	United Kingdom	409
5	Japan	204	5	Japan	228	5	India	274	5	Brazil	407
6	Germany	186	6	Germany	218	6	Japan	259	6	Spain	370
7	France	140	7	India	176	7	Germany	252	7	Japan	330
8	Italy	129	8	France	168	8	Brazil	224	8	Germany	311
9	Brazil	120	9	Brazil	165	9	France	192	9	France	242
10	Canada	101	10	Italy	154	10	Italy	180	10	Italy	233
11	Australia	101	11	Australia	131	11	Australia	154	11	Australia	209
12	India	100	12	Canada	125	12	Canada	147	12	Mexico	206
13	Mexico	85	13	Mexico	109	13	Mexico	137	13	Canada	195
14	Turkey	67	14	Turkey	92	14	Russian Federation	112	14	Russian Federation	178
15	Korea, Republic of	65	15	Russian Federation	84	15	Turkey	112	15	Turkey	157
16	Thailand	57	16	Korea, Republic of	78	16	UAE	95	16	UAE	152
17	Indonesia	56	17	Indonesia	71	17	Korea, Republic of	92	17	Indonesia	148
18	Russian Federation	52	18	UAE	70	18	Indonesia	92	18	Korea, Republic of	126
19	Netherlands	51	19	Thailand	70	19	Thailand	86	19	Thailand	125
20	Hong Kong	47	20	Hong Kong	61	20	Hong Kong	76	20	Hong Kong	113

Total air passenger traffic in India has increased from 109 million in 2008-09 to 162 million in 2011-12. Available forecasts suggest that by 2020 air passenger throughput will be around 350 million. In the absence of prior planning, this



could result in congestion and inefficient services at major airports, limited landing slots, inadequate parking bays and congestion during peak hours. To meet demand, the country will require approximately 325-350 operational airports (almost triple what we have today). A recent report by the Centre for Asia Pacific Aviation (CAPA) states that in the next 15 years India may require up to 500 operational airports. This implies that huge private investments will have to be attracted, to the tune of US\$30 billion as AAI alone will not be able to raise the funds.

Realizing this, the Government of India has decided to develop airport infrastructure on a Public Private Partnership (PPP) mode and has taken a number of initiatives to open the sector for private participation in modernizing existing airports as well as setting up new Greenfield airports. Because of these liberalizations, private participation has been allowed in Delhi and Mumbai Brownfield Airports and three new PPP Greenfield airports

have been set up at Cochin, Hyderabad and Bangalore. These five PPP airports have shown the world that PPP is a successful model to be followed for development of airport infrastructure in the country. The five together handle more than 60% of the country's air traffic. They have not only created world class infrastructure but also have been adjudged as the best airports in the world in their respective categories. In fact, several of the consortia operating India's private airports have also been invited to set up airport infrastructure outside our country.

All five PPP airports are based on long term contracts/agreements entered into with Government. CIAL's period of operation is on a perpetual basis, while for DIAL, MIAL, BIAL and GHIAL the period of contract/concession granted is 30 years, which is extendable for another 30 years at the option of the operators. Government has a minority share in all five. The revenue share agreed between Delhi and Mumbai Airports with the



Airports Authority of India is quite substantial. The detailed structures of the five PPP airports are illustrated below:

Name of the Airport	Name of the Operator	Shareholding Pattern	Type of Project/ PPP Structure	Date of Commencement of Airport Operations (Greenfield) / Date of signing of agreement with OMDA (Brownfield)	Revenue Sharing/ Concession fees
Cochin International Airport	Cochin International Airport Limited (CIAL)	Government of Kerala - 13% Central Government - 13% NRIs, Industrialists, Financial Institutions, Airport Service Providers and the Public - 74%	Greenfield/BOO	June 1999	Payment of dividend to the Government towards their 26% of equity capital
Bengaluru International Airport	Bamgalore International Airport Limited (BIAL)	Bangalore Airport & Infrastructure Developers Pvt. Ltd. (Subsidiary of GVK) - 43% Siemens Project Ventures GmbH - 26% Flughafen Zurich AG - 5% Karnataka State Industrial and Infrastructure Development Corporation Limited - 13% AAI - 13%	Greenfield/BOOT	May 2008	Concession fees - 4% of gross revenue to be shared with AAI
Chhatrapati Shivaji International Airport	Mumbai International Airport Limited (MIAL)	GVK Airport Holdings Pvt. Ltd. - 50.5% Bid Services Division Ltd. - 13.5% AAI - 26% ACSA Global Ltd. - 10%	Brownfield/BOOT	April 2006	38.7% of gross revenue to be shared with AAI
Rajiv Gandhi International Airport	GMR Hyderabad International Airport Limited (GHIAL)	GMR Group - 63% Govt. of Andhra Pradesh - 13% AAI - 13% Malaysia Airports Holdings Berhad - 11%	Greenfield/BOOT	March 2008	Concession fees - 4% of gross revenue to be shared with AAI
Indira Gandhi International Airport	Delhi International Airport Limited (DIAL)	GMR Group - 54% AAI - 26% Fraport - 10% Eraman Malaysia - 10%	Brownfield/BOOT	April 2006	45.99% of gross revenue to be shared with AAI

The growth in passenger and cargo traffic requires significant investments in terms of construction of new airports, expansion and modernization of existing airports, improvement in associated infrastructure, better air space management and multi mode access to the airports. There are challenges facing this sector and many path breaking progressive policy prescriptions are essential to take it to new heights.

The Government of India has granted 'in-principle' approval for setting up of PPP airports at Mopa in Goa; Navi Mumbai, Sindhudurg and Shirdi in Maharashtra; Shimoga, Gulbarga, Hassan and Bijapur in Karnataka; Kannur in Kerala; Durgapur in West Bengal; Pakyong in Sikkim; Datia/Gwalior (Cargo) in Madhya Pradesh; Kushinagar in Uttar Pradesh; Karaikal in Puducherry. In addition,

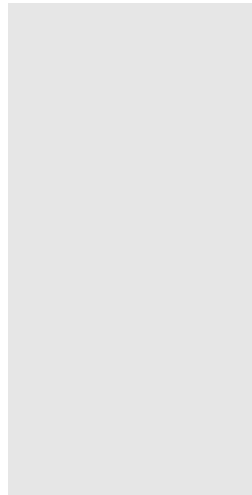
the Government of India has received proposals for setting up of Greenfield airports at Greater Noida in Uttar Pradesh; Belari in Karnataka; Rohtak in Haryana; Dholera in Gujarat; Alwar in Rajasthan; Solapur and Amarawati in Maharashtra.

The five existing PPP airports are examples of success stories across PPP model infrastructure in this country. The impressive growth of Indian Civil Aviation in recent years would not have been possible without the enormous airport infrastructure development works done by the five private major airport operators. To emulate this model for further setting up of new airports, Government must act quickly to make this sector investor-friendly by ensuring reasonable return on investment and proper policy orientation to ensure systematic sustainability,

economic viability and orderly growth of the sector. Although Government by now has recognised the importance of the Public Private Partnership approach, there are still a number of issues which are critical for the growth of infrastructure in the country and acceptability of PPP as the best model for infrastructure development, particularly for airport infrastructure. These include regulatory uncertainty, ensuring reasonable return on investment, long term and large scale financing requirements for PPP projects, issues of sovereign commitments in the concession agreements and taxation issues. Addressing these concerns will require policy reforms in the entire PPP framework.

Government has shown its commitment to take forward the PPP model to be implemented in the country by drafting a National PPP

Policy but there are several critical issues and concerns in that draft which need to be addressed properly. We look to the Government and to all the concerned authorities to address those issues and to make PPP the most favoured model for infrastructure development in the country which will satisfy the interest of all stakeholders and will place the Indian Civil Aviation sector amongst the top three aviation markets of the world.



Cochin International Airport Limited (CIAL)



Cochin International Airport Limited (CIAL) pioneered the concept of private investment in the airport sector after being incorporated as a public limited company, receiving investments from nearly 10,000 NRIs from 30 countries.

Cochin International Airport has state-of-the-art facilities housed in traditionally designed architecture unique to Kerala. The airport has three different terminals to channelise the services. The comparatively small Domestic Terminal can handle around 500 passengers at a time. There are over 20 check-in counters including 5 premium check-in counters while the waiting room can accommodate over 400 passengers. A small food court

and recreational area is also available for the passengers. The spacious International Terminal has 37 dedicated check-in gateways and 5 premium check-in counters. CIAL is the fifth airport in the country to use an in-line baggage screening system in place of the conventional manual X-ray scanning machines. In addition, there are more than 20 passport verification counters and 4 baggage carousels to ensure a smooth flow of traffic.

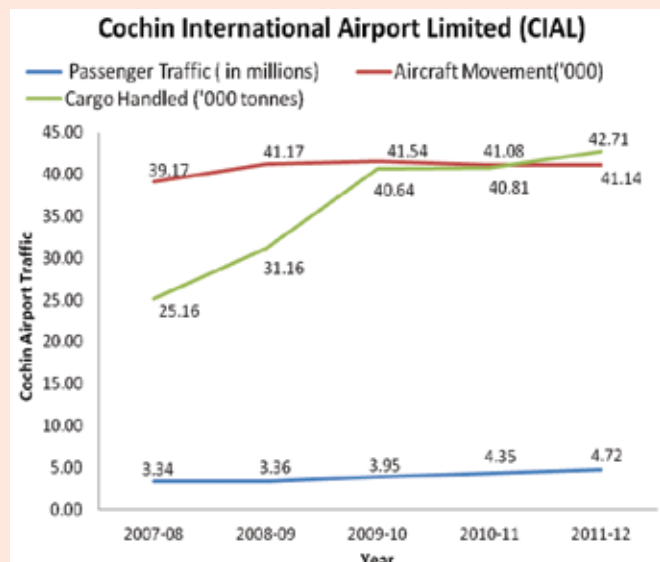
The cargo terminal of CIAL has some of the best facilities in the country. It has already registered an annual growth rate of 25 per cent and handled about 40,000 MT of cargo last year. It has a Center for Dry Cargo (CDC), where the cargo meant for

import or export is inspected, a Center for Perishable Goods (CPC), which is the largest cold storage facility in the country and a Transshipment Cargo Complex that offers warehouse facilities for the cargo.

The Airport is strategically located with easy access to all three National Highways passing through Kerala (NH 47,

and also to minimize the initial investments so as to generate revenue at the earliest possible time. By integrating connectivity with road, railway and port, this airport is part of a unique integrated transportation model.

The performance of Cochin International Airport is exhibited in the graph below:



NH 17 and NH 49). The main railway line from Kanyakumari to Delhi is adjacent to the airport, which is situated between Alwaye and Angamaly Stations. The Cochin Sea Port, one of the biggest in the country is also close by. Cochin Airport serves as a vital link in international trade, travel and tourism. The airport has been planned in phases on a modular basis to suit future requirements

With equity participation from the Government of Kerala, industrialists, NRIs, Financial institutions, airport service providers and the public, CIAL is considered a model enterprise international airport and has been awarded with several awards and honours for operational efficiency and best performance.

Bangalore International Airport Limited (BIAL)



Bangalore International Airport Limited (BIAL) is a Public Limited Company under the Companies Act formed to build, own and operate the Bengaluru International Airport. BIAL is responsible for the airport's operations, commercial activities and infrastructure development in line with growing air traffic.

The first phase of construction of Bengaluru International Airport was concluded in March 2008 and it became operational on May 24, 2008, 33 months from the start of construction. The Master Plan of this airport has been developed to fulfill the need for an operationally efficient and passenger friendly airport for the city. It ensures that the size and capacity of the airport facilities can be gradually expanded based on the passenger and cargo growth. It not only includes provision of premium land for commercial real estate developments such as office parks, retail, entertainment and hospitality but also land reserve for a rail link to the city.

BIAL is recognised for providing exceptional service to its passengers through a range of business excellence programmes. The ability to achieve value for the customers is driven by their focused

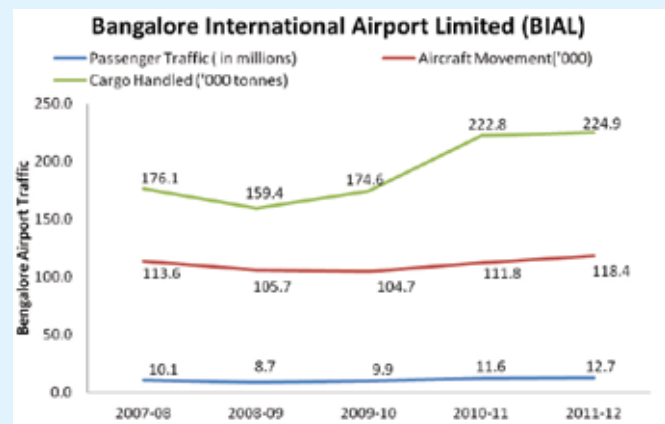
strategy and rigorous attention to operational efficiency. The company has pioneered initiatives and practices that set benchmarks for the industry. Some of these include Open Access Model for Fuel Farm, offsite ATF pipeline and the setting up of a collaborative model for AOCC (Airport Operation Control Centre) operations. On the technological front, the Airport introduced Common IT Infrastructure for all stakeholders and deployed common use Airline Systems such as CUTE (Common Use Terminal Equipment), CUSS (Common Use Self Service), BRS (Baggage Reconciliation System), etc. Further, it is the first BCBP (Barcode Boarding Pass)-compliant airport in India to receive a platinum certification from the IATA (International Air Transport Association).

Bengaluru Airport was originally planned to accommodate 5 million passengers a year, but based on the unprecedented traffic trends, the airport was redesigned to handle 12 million passengers per year. The redesign resulted in an increase in the size of the terminal, number of aircraft stands, new taxiway layouts and supporting infrastructure. Since the year this airport

opened in 2008, it has grown by 54% and continues to grow above national average every year. Adding to the increasing passenger traffic, the airport has seen the introduction of 15 new international airlines in the last 3 years which includes 6 new airlines in 2011. The airport handled 7.9 million passengers

Group each have state-of-the-art infrastructure and provide excellent, space optimized storage and processing units for both perishables and non-perishables. The total cargo handling capacity is about 350,000 MT.

The performance of BIAL is illustrated below:



in its first year of operations, and 10 million in the second year. The airport at present handles more than 350 aircraft movements, servicing around 35,000 passengers per day. In the year 2010-11, a total of 11.7 million passengers travelled through Bengaluru International Airport.

Bengaluru International Airport's two cargo warehouse operators, Air India & SATS and Menzies Aviation with Bobba

Some of the recent wins by this airport include "India's Best Airport" for the year 2011 by the survey conducted by Skytrax, "Best Emerging Airport – Indian Sub-continent", Emerging Markets Airports Awards (EMAA), 2010 and 2011 and Best Airport in India" by HT-MaRS Survey, 2010 and 2011.

Mumbai International Airport Limited (MIAL)



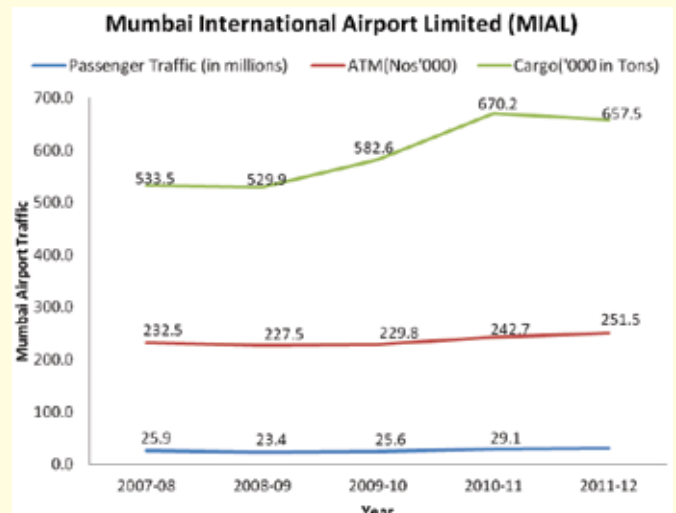
CSIA is one of India's busiest airports having recorded passenger traffic of 29.1 million in 2010-11, along with cargo traffic of 670,235 tonnes. MIAL is currently implementing a Master Plan that has been designed to have an integrated passenger terminal at Sahar with state-of-the-art infrastructure and facilities to cater to passenger traffic of 40 million per annum.

MIAL's vision is to transform CSIA into one of the world's best airports that consistently delights customers and will be the pride of Mumbai. For this purpose, MIAL has engaged well-known international experts in airport design and operations. Since taking over operations, MIAL has brought about significant improvements in operations. Some of the key highlights include the refurbishment of domestic terminals 1A and 1B, international terminals 2B and 2C and the opening of a brand new domestic terminal 1C. Some significant airside enhancements include the commissioning of new taxiways, aprons, reconstruction of the runway intersection and the reconstruction of both the main runway 09/27 and the secondary runway 14/32. This has led to

a considerable reduction in runway occupancy time for aircraft landing and taking off, thereby increasing the efficiency of runway operations. With an ongoing focus on passenger convenience and comfort in the long term, MIAL introduced a number of changes in the last six years. Some of these include a world-class duty-free at the international terminal, variety of F & B and wellness facilities at both the international and domestic terminals, website with real-time updates on flight schedules, entertainment facilities at the international terminal, faster immigration, efficient kerbside management and better streamlining of transport facilities outside the terminals. MIAL initiated the rollout of state-of-the-art technology to improve operational efficiency as well. Last year MIAL also announced the launch of its social media initiative for CSIA by going live on Twitter and Facebook. It was also the first airport in India to offer a General Aviation (GA) terminal for both domestic and international operations. MIAL has received several international and national accolades for its efforts in modernizing CSIA:

- First Indian airport to be certified ISO 10002:2004 for Passenger Complaint Handling conforming to international standards.
- First Indian airport and second in Asia to be
- 2010 by Airports Council International (ACI).
- 'Best Managed Airport' award from CNBC AWAAZ in 2009.
- Winner of the prestigious "Autodesk Hong Kong Building Information Modeling (BIM) Award 2009" for the proposed Air Traffic Control Tower designed by HOK.
- "Best Brownfield Airport in Public-Private Partnership" by the Air Passengers Association of India (APAI) and Consumers Association of India survey in 2009.
- First international airport to win 'Airport of the Year' Award by Frost & Sullivan Aeronautical Excellence in 2008.
- Winner of 'Best Airport in India' award by Air Passengers Association of India in 2007 and 2008.

The performance of MIAL is illustrated below:



accredited with prestigious ISO 14064-1:2006 certification for Carbon Emissions Accounting.

- Third best airport worldwide in the 25-40 mppa category for the year 2011 by ACI.
- "Special Commendation" for the Golden Peacock Award 2011 for Occupational Health & Safety.
- Second best airport worldwide in the 15-25 mppa category for the year

Terminal 2 at CSIA, Mumbai is acknowledged to be one of the most iconic developments in recent times, one which aims to take over the mantle of the new Gateway of India, in every sense. When complete, T2 will be a state-of-the-art 4-level integrated terminal with an area of over 4,39,000 m² and will include new taxiways and apron areas for aircraft parking designed to cater to 40 million passengers annually.

GMR Hyderabad International Airport Limited (GHIAL)

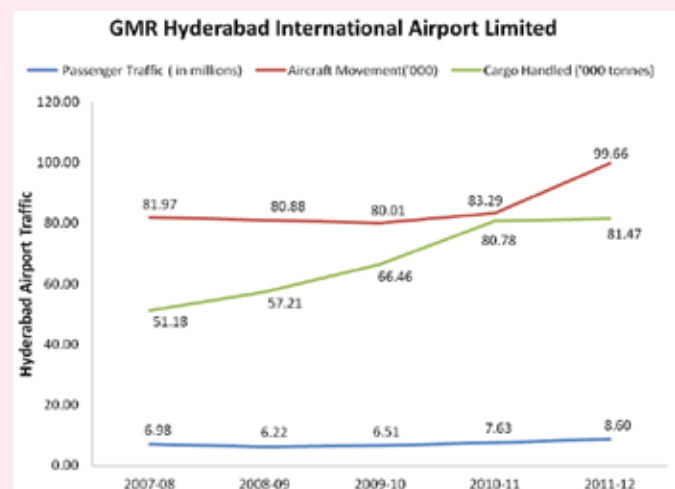


Rajiv Gandhi International Airport (RGIA) is on a 5500-acre site and is expected to have a handling capacity of 40 million passengers per annum. The airport, which was commissioned in a record time of 31 months in March 2008, has an initial annual capacity of 12 million passengers and 100,000 tons of cargo. RGIA is the first Indian airport to have the Airport Operations Control Centre which acts as the nerve centre for all coordination within the airport. Located strategically at the geographical centre of India within a two hour flying time to all the major cities in India, Hyderabad is well positioned and within a five hour radius from all major cities in the Middle East and South East Asia. Thus, it has the potential to not only become one of the main air travel hubs in India, but also an important

center for destination-cum-transit location for travel between the East and the West. The modular integrated cargo facility is spread over 14,330 m² with a capacity to handle 1,00,000 MT annually. Adjoining is an exclusive apron to accommodate Code-F aircraft. The airport provides two Animal Quarantine Stations. Other salient features of the airport include an integrated terminal that offers an international experience with a local flavor, airport village with shopping arcade, 305-room business hotel located just three kilometers away from airport, conference facilities for the business traveler and integrated modern IT systems. The airport has 13 lounges including the airline lounges. RGIA has been rated as the "Best in the World" by Airports Council International (ACI) in

the 5-15 million passengers category for its Airport Service Quality, consecutively for two years in 2009 and 2010. RGIA is the first airport in Asia to be awarded the Leadership Energy and Environment Design (LEED) silver rating for its eco-friendly design. It has also won the 'Outstanding Concrete Structure of Andhra Pradesh' award from

the Indian Concrete Institute. RGIA also won the 'Best Environmental Performance of the Year 2009' by Centre for Asia Pacific Aviation (CAPA) and National Tourism awards in Airport Category for two years in a row for 2010 and 2011. The performance of GHIAL is illustrated below:



Delhi International Airport Limited (DIAL)



Since privatization, Indira Gandhi International Airport (IGIA) has emerged as India's busiest airport. Besides upgrading the existing terminals and constructing the Greenfield Terminal 3, DIAL has also commissioned a new runway 11-29 and brought in modern infrastructure such as in-line baggage screening, spacious security hold area with extensive F&B and retail facilities, special contact zone for passengers with special needs and baggage handling area on a separate level allowing greater space for passenger amenities. The first phase of the airport is designed and capable to handle 60 mppa. In subsequent stages, the airport will be further developed with the increase in passenger demand and more terminals and runways would be added in a modular manner to form a U shaped complex with an ultimate design capacity of 100

million passengers per annum. Terminal 3 has state-of-the-art complex that features Common Use Terminal Equipment (CUTE) and an advanced 5 level in-line baggage handling system with explosive detection technology for greater efficiency and security. The check-in area features more than 168 check-in counters. For international passengers more than 95 desks

will facilitate immigration procedures. In addition, the terminal also features 78 aerobridges.

Access to the new terminal is via a six-lane approach road. The airport has also been connected through dedicated high speed Metro line connecting to the city centre. The performance of DIAL is illustrated below:

Indira Gandhi International Airport (IGIA) was conferred the "Fourth Best Airport in the World in the 15-25 million category" and "Best Improved Airport in the Asia-Pacific Region" by ACI and was ranked the "Second Best Airport in the World" in 25-40 million passenger category again by ACI.

