



## **Upgrading India's Airport Infrastructure A Background Note**

Civil Aviation is the fastest growing arm of India's transport infrastructure and it plays an increasingly important role in providing connectivity. The projections for both passenger & cargo traffic growth, coupled with the deficient & lagging airport & allied Infrastructure, calls for an urgent need to build & augment India's Aviation Infrastructure.

There is an urgent need for India to have world-class gateway Airports providing aviation services and passenger/cargo facilities of global standards, in a safe and secure environment.

The Aviation climate in India needs to ensure the healthy growth of Airlines, together with the Airport operators and allied service providers; while also building the avionics and aviation equipment capabilities of Indian industry. The government and the statutory authorities have a critical role in achieving this vision.

### **INDIA'S AVIATION INFRASTRUCTURE**

The Indian civil aviation sector is showing an extraordinary growth rate in the last few years. In 2005-06, the passenger traffic rose by 25-30% and is expected to grow by 25% year-on-year over the next five years. However, such a pace of growth in air traffic has also resulted in a strain on the aviation infrastructure, which is already stretched – resulting in traffic congestions and delays at majority of the airports. At Delhi airport, approximately 327 domestic aircrafts land and take-off everyday. This means that about 10.04 million passengers are ferried by the domestic airlines alone every year, while the terminal can handle only a meager 7.15 million. Hence, if a high growth in civil aviation sector is to be sustained, it would call for improvement of infrastructure facilities on several fronts.

*As per certain projections, by 2020, Indian airports are estimated to handle;*

- *100 million passengers*
- *Including 60 million domestic passengers*
- *Cargo in the range of 3.4 million tones per annum*

Table: Air Traffic Forecasts:

Year	Aircraft Movements (In '000)			Passengers (In Lacs)			Cargo (In '000 MTs)		
	Inter-national	Domestic	Total	Inter-national	Domestic	Total	Inter-national	Domestic	Total
2005-06 (Base Year)	190.89	647.42	838.31	223.62	509.76	733.38	920.15	483.80	1403.95
<b>Growth Rate</b>	<b>13.2%</b>	<b>14.7%</b>	<b>14.4%</b>	<b>15.9%</b>	<b>19.9%</b>	<b>18.8%</b>	<b>12.1%</b>	<b>10.1%</b>	<b>11.4%</b>
2006-07	216.14	737.94	954.08	258.54	609.05	867.59	1028.66	531.64	1560.3
2007-08	243.91	843.10	1087.01	298.54	728.72	1027.26	1151.05	584.61	1735.6
2008-09	275.58	965.54	1241.12	345.31	873.11	1218.42	1289.26	643.31	1932.5
2009-10	311.74	1108.39	1420.13	400.14	1047.51	1447.65	1445.50	708.39	2153.8
2010-11	353.09	1275.38	1628.47	464.54	1258.39	1722.93	1622.33	780.60	2402.9
2011-12	400.45	1470.99	1871.44	540.37	1513.63	2054.00	1822.69	860.78	2683.4

Source: Airport Authority of India

The government has taken a number of measures to step up the airport infrastructure for the country. It has envisaged a modernization plan with a view to modernize 37 non-metro airports. On the lines of the successful model of the Central Road fund, the government is considering setting up the Essential Air Service Fund to support the country's airport infrastructure.

Keeping in mind the huge requirement of funds for the development of airport infrastructure and the financial constraints coupled with other conflicting budgetary priorities of the government, the government has invited private participation in the modernization program of the major airports. Delhi and Mumbai airport development projects are being undertaken through public-private partnership ventures.

There needs to be an effort towards optimum utilization of the existing airports by addressing the problems of outdated infrastructure, inadequate ground handling systems and night landing facilities, and poor passenger amenities. At the same time it will also be required to create new airports at several places where there is a scope. There needs to be improvement in the airside infrastructure & terminal infrastructure at India's airports.

## INVESTMENTS IN AIRPORT INFRASTRUCTURE

With the increase in traffic for both passenger & cargo aviation services in India, the government has put in place a program for directing investments in the Airport infrastructure – through both internal resource mobilization, as well as through private sector participation in modernizing specific Airports. The Committee on Infrastructure has initiated several policy measures that would build world-class airport infrastructure in India. A Model Concession Agreement is also being developed for standardizing & simplifying the PPP transactions for airports. In any future projects for development of existing airports, it has been decided that the length of the runway would be at least 7,500 feet (which is needed for the A 320 and similar aircraft).

Table: Contours of the airport development programme

(Rs. in crore)

Particulars	Airport	Indicative Cost
Restructuring/ Modernisation for world class airports	Delhi & Mumbai	15,000
	Chennai & Kolkatta	5,000
Greenfield airports	Bangalore, Hyderabad, Goa, Pune, Navi Mumbai, Nagpur (Hub) & Greater Noida	10,000
Upgradation	25 selected airports	7,000
Modernisation / Improvement	55 airports	3,000
Total investment by 2010		40,000

Source: Airport development programme, presented to the Committee on Infrastructure (Col)

### i. Greenfield Airports

100% FDI is allowed through the automatic route for Greenfield Airports in the Country. In Bangalore and Hyderabad, the government has initiated the construction of Greenfield airports through Build Own Operate and Transfer (BOOT) basis with private sector participation. The project at Bangalore will cost Rs 14 billion, while the project at Hyderabad will cost Rs 17.6 billion. In both these projects, AAI holds 26% equity and the rest 74% is held by private stakeholders.

AAI has also proposed to establish a Greenfield airport in Navi Mumbai to meet the long term requirement of air traffic of the Mumbai region. A second airport for Goa, in Mopa, has also been planned. It has been estimated that Greenfield

Airports in Bangalore, Hyderabad, Goa, Pune, Navi Mumbai, Nagpur and Greater Noida will cost about Rs 10,000 crores.

For all future Greenfield airports in India, it has been mandated that there be at least two parallel runways.

- Bangalore International Airport Ltd. (BIAL): The BIAL Master Plan has been developed to fulfill the need for an operationally efficient and passenger friendly airport. This new airport will be able to handle up to 11 million passengers and will be ready for operation by April 2008. A consortium led by Siemens, Germany with Unique Zurich, Switzerland and Larsen & Toubro India Ltd. as other members have been chosen as the strategic Joint Venture Partners. GoK is extending Rs. 3.5 billion as State support and is providing approximately 4000 acres of land on concessional rent. AAI's investment in the equity is capped at Rs. 500 million, while the approximate cost of the project is Rs. 14 billion.

Table: Funding plan for Bangalore and Hyderabad airports

	Hyderabad		Bangalore	
	Capital (In Rs. cr.)	Percentage of total	Capital (In Rs. cr.)	Percentage of total
AAI Share	49	3%	43	3%
State Support	422	24%	350	25%
Equity of Private promoters	330	19%	284	20%
Loans from Lenders	961	54%	735	52%
<b>Total</b>	<b>1762</b>	<b>100%</b>	<b>1412</b>	<b>100%</b>

Source: Planning Commission

- Hyderabad International Airport Ltd. (HIAL): HIAL is a public-private joint venture between GMR Group, Malaysia Airports Holdings Berhad and both the State Government of Andhra Pradesh and Airports Authority of India (AAI). GMR Group holds 63% of the equity, MAHB 11%, while the Government of Andhra Pradesh and Airports Authority of India each hold 13%. This new airport will be operational by August 2008. A Special Purpose Vehicle has been set up for the construction of this airport. AAI's equity is being capped at Rs 500 million, while the approximate cost of the project is Rs 17.6 billion.

## ii. Modernization of existing airports in Delhi & Mumbai

The existing International airports in Delhi and Mumbai are being restructured and modernized through Private sector participation. In the Joint Ventures, AAI and other Government PSUs hold 26% equity, with the balance 74% being held by the strategic partner. As per the current policy of the government, the FDI in existing airports has a sectoral cap of 49%. The development plans for Delhi and Mumbai airports envisage an investment of Rs. 5,270 crore and Rs. 6,130 crore respectively (totaling Rs.11,400 crore) during the period of 2006-07 to 2013-14 for development of these two airports. The respective state governments have formulated State Government Support Agreement to provide support to the projects in matters relating to removal of encroachments or procurement of additional land for development of airport, removal of obstruction outside the airport boundary to ensure safe and efficient air traffic movement, and to improve the surface access to the airport and to provide utilities like water, power, etc.

Table: Funding of Delhi and Mumbai airports

(Rs. in crore)

<b>S. No.</b>	<b>Source</b>	<b>Funding</b>
1.	Equity contribution by AAI	302
2.	Private Equity	1,200
3.	Internal Resources of JV Co	2,298
4.	Borrowings of JV Co	7,600
	<b>Total</b>	<b>11,400</b>

Source: Planning Commission

## iii. Modernization of Non-Metro Airports

The Prime Minister's committee on infrastructure has given its in-principle approval for modernization of 37 non-metro airports (including Sikkim and Arunachal Pradesh airports). The Ministry of Civil Aviation has set the target of 2008-09 for the completion of these projects. The project model would be such that all aeronautical activities at these airports would be handled by the AAI, while a public-private partnership (PPP) model would be followed for the development of non-aeronautical activities at the city side of these airports. The PPP model is likely to peg the foreign direct investment (FDI) levels at 49 per cent with the private sector partner being allowed to pick up 74 per cent equity in the project. AAI has decided not to seek any budgetary support for the modernization process that is expected to cost between Rs 7,000 and 8,000 crore. The funds required would be garnered from internal resource mobilization by the AAI.

Table: Planned capex on thirty five non-Metro airports

(Rs. in crore)

<b>Phase</b>	<b>Terminal Building, Carpark, Cargo</b>	<b>Air Side</b>	<b>City side</b>	<b>Total</b>
Phase-I	1,496	420	1050	2966
Phase-II	1,240	682	300	22022
Phase-III	530	294	150	974
<b>Total</b>	<b>3,267</b>	<b>1,396</b>	<b>1,500</b>	<b>6,162</b>

Source: Planning Commission