Introduction to Airline Industry

Dr. Sumeet Suseelan

Himalaya Publishing House
ISO 9001:2015 CERTIFIED
Introduction to Airline Industry

(As per New CBCS Syllabus for 1st Semester, BBA – Aviation Management, Bengaluru Central University w.e.f. 2019-20)

Dr. Sumeet Suseelan
MBA, DAHTM, DBA, Doctorate in Aviation Management
Former Cabin Crew AirAsia / Air India
CMD, International Institute of Aviation

Himalaya Publishing House
ISO 9001:2015 CERTIFIED
The main idea of this book is to deliver high-standard quality material, which is the latest information in aviation industry.

As a response to global trends and challenges in this industry, this course has been precisely portrayed to get intensive knowledge on the aviation management. This book introduces the students on latest trends and updated information in the industry, eventually to produce highly qualified professionals in the field of modern aviation management, who would easily interpret the laws and challenges of competitive and global aviation industry, and be able to contribute thoroughly to development of aviation industry.

   After this course, the graduates will be able to:
   ● Focus on the multi-disciplinary skills
   ● Identify the problems and trends
   ● Make managerial decisions independently
   ● Form groups required for their implementation
   ● Organise the necessary activities

   The information discussed in this book has a blend of theory with interactive sessions.

   Author
SYLLABUS

Objectives:

Understanding about the airline industry and its regulatory bodies, Understanding the characteristics of Airline Industry, Understanding the organisational structure of the airline industry, Understanding the security, navigation and traffic control, and Understanding the importance of safety and security.

UNIT 1: INTRODUCTION TO AIRLINE INDUSTRY 10 Hrs
Scope – Types – Scheduled and Non-scheduled Flights – Air Cargo Transport – Economic and Social Impact – Regulatory Bodies – Key Performance Indicators.

UNIT 2: CHARACTERISTICS OF AIRLINE PROFITABILITY 10 Hrs

UNIT 3: ORGANISATIONAL STRUCTURE OF AIRLINE ALLIANCES 16 Hrs

UNIT 4: AIRPORTS AND ITS SERVICES 10 Hrs

UNIT 5: AIR SAFETY AND SECURITY 10 Hrs
## CONTENTS

1. Introduction to Airline Industry ......................................................... 1 - 35

2. Characteristics of Airline Profitability ............................................. 36 - 42

3. Organisational Structure of Airline Alliances ................................... 43 - 89

4. Airports and its Services ................................................................. 90 - 115

5. Air Safety and Security ................................................................. 116 - 131
INTRODUCTION TO AIRLINE INDUSTRY

A century after the first commercial flight, the aviation industry continues to offer a variety of exciting and rewarding career options for qualified professionals. “Aviation” is a growing industry with very practical purposes.

Worldwide, airlines carry more than 3 billion passengers a year and deliver about one-third of traded goods by value. Aviation sector employment also is seen as strong. Airlines employ about 2.5 million workers and expect “to accelerate the pace of hiring over the next year”.

Overall, about 9 million people are employed in the global aviation sector. In the United States alone, there are almost 20,000 airports. Whether you are interested in working for a major airline carrier, an international airport, a government agency or a general aviation service provider, an associate’s or bachelor’s degree in aviation management can provide the foundational and specialised knowledge needed to succeed in a range of careers.

As we all know that airline industry has seen much development after the post World War II period. With the progress in aviation techniques, airlines have paved a way for making travel and tourism better in every way. Hence, it plays a major role in the travel and tourism.

The airline industry exists in an intensely competitive market. Observing a growth of 17.62% over the past year and with the recent development, there has been a significant increase in the airline opportunities.

Both domestic and international airlines require trained professional on the airports for different kinds of jobs including ground staff, flight attendants, ticketing counters as well as air hostesses. Thus, looking at the wider scope of the airline industry, it is very much beneficial for the travel industry.

1.1 SCOPE OF AVIATION

India at a Glance

India is the seventh-largest country by area and the second-most populous with a population of over 1.35 billion. India is one of the fastest growing economies of the world and is likely to become the fifth-largest in 2019.
The history of the Indian subcontinent dates back 5000 years to the Indus Valley Civilisation which gives it its name. It is a melting pot of all major religions of the world – Hinduism, Islam, Sikhism, Christianity, Buddhism, Jainism, Judaism and Zoroastrianism. It has a rich biodiversity with Himalayas in the north, the Thar Desert in north-west, Bay of Bengal to its east and Arabian Sea to its west; with various rivers and forests across the country.

A nuclear weapon state, India, shares its land border with two other nations with nuclear capability – China and Pakistan – and countries like Nepal, Bhutan, Bangladesh and Myanmar. It has the third-largest standing army in the world and the fifth-largest defence budget. It has a robust space programme with the capability to launch its own satellites. Its leading industries include IT, pharmaceuticals, automotive and telecom.

India is parliamentary democracy with an independent judiciary and free media. It has 29 states and 7 union territories with a huge diversity in terms of language, cuisine and culture.

Indian Aviation Industry

The Indian aviation market is on high growth path. Despite global headwinds on crude oil and currency, domestic passenger traffic in the period January-November 2018 grew by 19.2% year on year. Total passenger traffic to, from and within India, during April-November 2018 grew by around 15% year on year.

As per IATA, the number of global departures during calendar year 2018 is projected at around 4.3 billion, a growth of 6% over the previous year. In contrast, in December 2018, India completed 52 consecutive months of double digit growth. Yet, many feel, India is just scratching the surface.

This stupendous growth has catapulted India among the top seven aviation markets with 187 million passengers (to, from and within India) in FY2017-18. India today handles the third-largest domestic traffic after USA and China. It is expected to become the third-largest market (domestic plus international) by 2022 and gradually reduce the gap with the top two nations over the next decade.

The Growth Drivers

The civil aviation industry is vulnerable to several intrinsic and extraneous risks. These include economic boom and bust cycles, volatility in oil price and exchange rates, natural disasters, epidemics, infrastructure challenges, protectionism, wars and political upheavals, etc.

The Indian civil aviation industry has managed to exhibit significant resilience against these risks over the last two decades. Some of the key reasons behind the rapid growth of the Indian aviation sector include:

(a) Steady growth in the Indian economy, which is now poised to become the fifth largest after US, China, Japan and Germany.

(b) Domestic open skies which allows new airlines to freely enter the market subject to stipulated norms.
(c) Partial open skies in international routes wherein India’s neighbouring countries and those outside a 5000 km radius from the capital New Delhi can have unlimited flights to designated international airports in India.

(d) Growth of highly competitive Low Cost Carriers (LCC) in India.

(e) Development and operation of leading airports at Delhi, Mumbai, Hyderabad, Bengaluru, Hyderabad and Cochin through the Public Private Partnership (PPP). Many more are on the anvil.

(f) Formulation of the industry-friendly National Civil Aviation Policy 2016 (NCAP 2016) that covers almost all aspects of Indian aviation.

(g) Opening up of regional airports in India’s hinterland through the landmark Regional Connectivity Scheme (RCS) popularly known as UDAN (‘Ude Desh ka Aam Nagrik’).

(h) Removal of FDI limits for almost all sub-sectors like airports, air cargo, ground handling, general aviation, Maintenance, Repair and Overhaul (MRO), etc.

(i) Liberalisation of global Wing rights with all Indian carriers having a fleet of 20 aircraft free to fly abroad.

(j) Clear intent of the government to leverage the strengths of the private sector by way of privatisation of the national carrier Air India, helicopter company Pawan Hans and operation of large government-owned airports through PPP.

**Government’s Step**

The Indian government is likewise taking steps for development of aviation industry. Recently, they have propelled a new plan named as UDAAN Yojana. This plan guarantees that traveling via air is reasonable for all, which will resultantly draw more travellers to different airlines.

**India – A Growing Aviation Market!**

Looking at the aviation sector in India, many developments are seen in recent times. According to the International Air Transport Association (IATA), India is the fastest growing aviation market currently. Bangalore is the aviation manufacturing hub in India, where most of the airlines are manufactured. Also, with the increased customer expectations, the airline industry has launched new airlines and services for the benefits of passengers. Vistara Airlines, which is a joint venture of Tata Sons and Singapore Airlines, is currently the best full-service airline in India. Also, it is the only airline offering a premium economy class for passengers wanting to travel with better services and amenities. Recent increase in Foreign Direct Investment (FDI) has also changed the face of aviation industry of India. The international aviation industry, on the other hand, is further developed with many more services and amenities.

They generally provide services to virtually every corner of the world. Also, this is the major resultant factor in the increase of global economy on a large scale. Today, global airlines consist of more than 2000 airlines that are operating more than 23,000 aircraft. Thus, with the emerging trends in IT and developments in technology, there is much more scope for the airline industry in India to make its way to the top.
Introduction to Airline Industry

Opportunities in Airlines

Considering the extent of the airline industry, there are a number of options for a career in the airline industry. Airlines are always in need of certified professionals for different kinds of jobs on the airport. These jobs include ground staff, flight attendants as well as administration.

Apart from the above mentioned, you can also find other options such as a job of pilot. Now, let us look at some of the types of pilot jobs:

- **Cargo Pilots**: They fly every kind of cargo airlines such as UPS, FedEx, etc.
- **Airline Pilots**: They fly all the domestic or international airlines.
- **Corporate Pilots**: They fly the inglenook, high-end aeroplanes for the high class commuters.
- **Aerial Firefighter Pilots**: It is combined with other options, which is based on contracts and requirements.
- **Military Pilots**: They fly specialised aircrafts in order to transport equipment and to accomplish combat missions.

Thus, there are endless opportunities in the airline industry. If you are planning to get into the industry, you must have completed the IATA certification courses which are provided at different institutes throughout India. Also, there are a number of institutes in India, offering different courses in travel and tourism which can help you to get into the travel industry.

Government Initiative to Improve Air Connectivity within India and Overseas

**UDAN-RCS – UDAN (Ude Desh ka Aam Naagrik)** is a regional airport development and “Regional Connectivity Scheme” (RCS) of Government of India, with the objective of “letting the common citizen of the country fly”, aimed at making air travel affordable and widespread, to boost inclusive national economic development, job growth and air transport infrastructure development of all regions and states of India.

At the beginning of the scheme, out of total 486 airports, 406 were participating unserved airports, 27 were well served airports out of 97 non-RCS airports and 12 were operational airports out of 18 participating underserved regional operational airports (November 2016) with regular fixed-wing scheduled flights. UDAN scheme will add to this number by expediting the development and operationalisation of India’s potential target of nearly 425 unserved, underserved and mostly underdeveloped regional airports with regular scheduled flights.

The scheme has two components. The first component is to develop new airports and enhance the existing regional airports to increase the number of operational airports for scheduled civilian flights from 70 (in May 2016, total 98 operational including army airports) to at least 150 airports (by December 2018) with regular scheduled flights.

Initially, more than 100 underserved (no more than 7 scheduled flights per week) and unserved regional airports will be developed by December 2018, for which the initial funding of ₹ 45,000 million (equivalent to ₹ 47 billion, US$ 680 million or € 610 million in 2018) for the
enhancement of 50 regional airports was approved in May 2017. Out of the total 70 airports included in Round-I, 43 are regional airports to be newly operationalised. RCS-UDAN operations have commenced from 13 regional airports and additional 12 regional airports are ready to receive flights. 18 regional airports still require significant upgrade (November 2017).

The second component is to add several hundred financially viable, capped airfare, new regional flight routes to connect more than 100 underserved and unserved airports in smaller towns with each other as well as with well served airports in bigger cities by using “Viability Gap Funding” (VGF) where needed. Initially, three separate rounds of bidding for the award of routes will be concluded by the end of 2018. Union Government share of “Viability Gap Funding” is from the cess applied to flights to popular routes to main cities and respective state governments have also offered additional benefits to the flight operators to make UDAN-RCS viable.

UDAN-RCS Round-I concluded in April 2017, 5 airlines companies were awarded 128 fixed-wing flight routes to 70 airports (including 36 newly made operational airports, taking the number of total number of operational airports with civilian scheduled flights to 106 and total 131 airports operational with civilian and army operation including dual-use airports), several of which have already become operational by November 2017 and most of remaining routes will become operational by December 15, 2017. UDAN-RCS Round-II results will be awarded in late December 2017, from among the 141 proposals received for 502 new regional routes from 17 airlines and helicopter companies to operate flight services.

Number of aircraft jumped 38% to 548 in December 2017 from 395 in 2014 and 50 aircraft are being added every year. Subsequent phases with inclusion of seaplanes will boost the number of potential landing sites from nearly 500 airports to over five lakh (500,000) water bodies as well as more locations along India’s 7,000 km coastline. SpiceJet has placed a US$ 400 million order for 100 of these 12-seater amphibian seaplanes (December 2017).

UDAN-RCS is both enabler and beneficiary of other key Government of India schemes such as Bharatmala, Sagarmala, Dedicated Freight Corridors, Industrial Corridor, BharatNet, Digital India and Make in India, National e-Governance Plan, Startup India and Stand Up India.

Air Deccan Officials from Left to Right
(Dr. Sumeet Suseelan, Mr. Bupesh Joshi, Mr. Anantha, Mr. Shah and Mr. Hussain)
The UDAN Scheme

The UDAN Scheme is a key component of the Prime Narendra Modi’s National Civil Aviation Policy (NCAP) which was released by the Ministry of Civil Aviation (India) on June 15, 2016. The scheme will be jointly funded by the central government and state governments. Several states have come on board by signing the “Memorandum of Understanding” with the Union Government for this scheme. UDAN-RCS will connect an unspecified number of new regional routes, by operationalising 100 regional airports by the end of 2018-2019 financial year, with a target of 13 lakh (1.3 million) annual passenger seats, requiring annual INR 200 crore Viability Gap Funding (VGF). The frequency of flights must be minimum 3 and maximum 7 per week from the same airport.

India has 394 unserved and 16 underserved airports. Out of a total of these, 410 potential-target unserved and underserved regional airports, INR 4,500 crore has been approved in 2016-17 Union Budget to revive and further develop 50 airports in the smaller regional towns between 2017-20 15 airports during 2017-18, another 15 airports during 2018-19, and 20 more airports during 2019-20. A total of 75 airports were operationalised for the civilian flights in India since independence, government has newly operationalised additional 36 regional airports for the civilian flights including 3 civil enclave within army airports, with regularly scheduled flights, within the single financial year of 2016-17, with the target to complete cumulative total of 50 operational regional airports by the end of 2018-19, and eventually operationalise a cumulative total of 100 regional airports by December 2018.

Indian Prime Minister Narendra Modi launched the scheme on April 27, 2017 by flagging off the inaugural regional flights between Delhi and Shimla, and also between Kadapa-Hyderabad-Nanded.

Concessions to Operators

The scheme will run for 10 years and can be extended thereafter.
From Central Government

Following concessions from the Government of India:

- Value Gap Funding (VGF) to subsidise the airfare.
- Concession on service tax on tickets.
- Code-sharing of UDAN-RCS flights permitted with other operators.

From State Governments

Following concessions from the participating state governments at their respective UDAN-RCS airports:

- Reduction of VAT (or GST after GST came in operation) to 1% or less for 10 years.
- Coordinate with oil companies to create fueling infrastructure on airports.
- Provide free land for the development of airport, with multimodal (rail, road, metro, waterways, etc.) hinterland connectivity.
- Provide free trained security.
- Provision of water, electricity and other utilities at reduced rate.
- Provide 20% share of Value Gap Funding, North-Eastern states, and Union territories to provide 10% share only.
- State governments are encouraged to provide additional concessions.

From Airport Operators

Airport operators (commercial or private companies, central and state governments or their entities such as AAI and Defence Ministry) must agree to provide the following concessions in order to participate in UDAN-RCS scheme.

- No landing, parking or other charges.
- No Terminal Navigation Landing Charges (TNLC).
- Allow selected airline to manage the ground handling of flights.
- Route Navigation and Facilitation Charges (RNFC) will be applied on UDAN-RCS flights by AAI on a discounted rate of 42.40% of normal rates.

UDAN-RCS Cargo Flights Concession

Cargo flights will be given similar benefits except no “Value Gap Funding” (VGF) will be provided.

UDAN-RCS Fares

For the fixed-wing aircraft, there is a cap of maximum fare of INR 2,500 per hour of flight for the 50% of the seats (minimum 9 RCS seats and maximum 40 RCS seats per fixed-wing flight, and maximum 12 helicopter RCS seats per heli flight), connecting unserved and underserved regional airports, remaining 50% seats will be priced at market rate. Capped RCS fares will also be graded based on distance, e.g., INR 1,420 for a distance of 151-175 km, INR 1,500 for a distance of 176-200 km, and so on, with a ceiling of maximum INR 3,500 fare for a total distance of 800 km or more.
For the helicopter services, maximum fare is also capped at INR 2,500 for every 30-minute leg of flight. Capped helicopter fare will be graded on the time of flight, e.g., INR 2,500 for a flight of 0 to 30 minutes, INR 2,900 for a flight of 31 to 35 minutes, and so on, with a ceiling of maximum INR 5,000 fare for a total flight duration of 60 minutes or more.

Viability Gap Funding (VGF)

The scheme entails making the routes financially viable, without insisting on the financial viability of the regional airports, by lowering the cost of flight operations and through financial support in the form of Viability Gap Funding (VGF). VGF will be available to flight operators on specific routes for the first three years of operation.

The demand-driven revival and enhancement of the regional airports with financially viable commercial flight routes is based on the combination of seeking firm proposals from airlines for the names of airports they wish to fly to and MoU-bound commitment from the state governments for providing various concessions for the airport operations such as state tax concessions, free land, security, etc. Participating states, Northeast states and Union Territories are required to sign the MoU with the Union Governments to share the 20% and 10% burden of VGF respectively.

To make the routes viable for commercial airlines, the Union Government offers flexible code-sharing arrangements, and reduced excise on value-added tax on fuel and service tax. Airports, some owned by the Airports Authority of India and others by the respective state governments, will not charge the landing and parking charges, and terminal navigation landing charges.

Airlines will be given a Value Gap Funding (VGF) raised from the RCS levy. Starting from 2017, the airfare cap and VGF in this 10-year scheme will be revised quarterly based on Consumer Price Index for Industrial Workers.
**Introduction to Airline Industry**

**UDAN-RCS Levy**

RCS subsidy will be raised by levying a cess, which will be revised periodically, on the flight between main trunk routes connecting major cities. Starting from June 1, 2017, it is initially at a flat rate of INR 5,000 per flight, translating into roughly INR 30 per passenger.

**Impact of STOL, Seaplanes, Ski Planes and Bush Planes on UDAN-RCS**

UDAN Phase-I had only fixed-wing aircraft.

Phase-II included helicopters also. Subsequent phases are likely to include STOL seaplanes, ski planes and bush planes that can fly from STOL port, thus opening up many more destinations by enhancing potential pool of landing sites from nearly 500 airports to over five lakh (500,000) water bodies and thousand more locations along India’s 7,000 km long coastline, as these 10-14 seater seaplanes costing INR 12-13 crore (₹ 130 million (equivalent to ₹ 140 million, US$ 2.0 million or €1.8 million in 2018)) can land in even 1 foot deep water. On December 9, 2017, a successful trial run was completed from Girgaum Chowpatty. On December 12, 2017, Prime Minister Modi also rode a seaplane from Sabarmati River to Dharoi Dam.

Civil Aviation Ministry and Water and River Resources Ministry will come out with rules for the seaplanes, within 3 to 6 months, along the lines of United States, Canada and Japan. SpiceJet has placed an order for 100 of these 12-seater Japanese Quest Kodiak amphibian seaplanes for US$ 400 million, including long-term parts and maintenance (December 2017) with the view to operationalise the planes within a year.
UDAN-RCS Connectivity by Rounds

Bidding Process

AAI aims to operationalise hundreds of routes in several rounds of UDAN-RCS from at least 100 regional airports by the end of 2018-19 financial year. AAI will periodically publish the updated list of participating airports and helipads with collaboration from their owners such as central government, state government, commercial and private parties, and in addition, any entity can list their airport or helipad with the government for this scheme. Three rounds of bidding for operationalisation of new routes will be conducted in 2016-17 and 2017-18 financial years. More rounds of bidding will follow till the end of 2018-2019 FY. Airlines (including seaplane) and helicopter service providers will bid for the routes with at least 9 seats and a maximum of 40 seats for the fixed-wing aircraft, and a minimum of 5 seats and a maximum of 13 seats for the helicopters. To ensure the sustainability of the routes by lowering the commercial risk, these “specific” routes will be awarded on an exclusive basis to the winning parties. Preference is given to the bidder who bid for zero-VGF (operators who rely on no government subsidised VGF to sustain their operation). For example, in Phase-I, SpiceJet bid was zero-VGF, and in Phase-II, SpiceJet and IndiGo bids were zero-VGF.

UDAN-RCS Round-I (2017, April)

UDAN-RCS Round-I: 128 new regional fixed-wing routes from 70 airports, including 27 currently well served metro airports and 43 regional airports (31 unserved and 12 underserved, 36 out of 43 are newly made operational including 2 civilian enclave within army airports), were awarded to 5 fixed-wing airlines on April 27, 2017. Five airlines are Air Odisha (50 routes, new airline), Air Deccan (34 routes, relaunched airline), Turbo Megha Airways (18 routes), Alliance Air (15 routes, Air India subsidiary) and SpiceJet (11 routes). Several routes are already operational on December 13, 2017, most of remaining routes all to be operated by Air Deccan, and Air Odisha will become operational by December 13, 2017 and December 31, 2017 respectively. SpiceJet was the only bidder with zero-VGF.
UDA-RCS Round-II (2017, December)

UDAAN-RCS Round-II: 502 new regional fixed-wing and helicopter routes were bid in 196 proposals (55 counter proposals from 10 airlines and 141 initial proposals from 17 airlines including 108 for the fixed-wing and 33 for helicopters) to connect 126 airports and heliports (49 unserved, 15 underserved, 38 well served and 24 helipads). Second round results will be awarded in late December 2017. SpiceJet and IndiGo are bidders with zero-VGF.

UDAN-RCS Round-III (25 January 2019)

UDAN-RCS Round-III: The Central Government has received bids for 111 routes from 15 airlines under the third round of auction for the UDAN scheme. SpiceJet and IndiGo has bid for 37 routes and 20 routes in the third round of auctions. Ghodawat Enterprises Private Limited has bid for total of 15 routes in this round. The Centre did not include chopper routes under the Round-III of auctions as there have already been “so many pending routes under UDAN-2 that have not been initiated through helicopters”, the official said.
Introduction to Airline Industry

UDA-RCS Round-IV
UDA-RCS Round-IV: UDAN 4, 5 and 6 under process will be launched soon.

UDA-RCS Round-V
UDA-RCS Round-V: Will be launched soon.

UDA-RCS Round VI (2019)

Summary Status Table

- Total in-scope target current airport: 486.
- Total operational airports at beginning of scheme: 39 (27 well served out of total 62 non-RCS airports and 12 underserved out of total 18 participating underserved regional operational airports).
- Total unserved participating airports at beginning of scheme: 406.
- Helicopter routes: Hill states (North-East states, J&K, Himachal Pradesh and Uttar Pradesh) and oceanic union territories (Lakshadweep Islands and Andaman and Nicobar Islands) only.

<table>
<thead>
<tr>
<th>Round</th>
<th>Fixed-wing / Helicopter</th>
<th>Routes Awarded</th>
<th>Total ports</th>
<th>Unserved ports</th>
<th>Underserved ports</th>
<th>Well served ports</th>
<th>Winners # of airlines / providers</th>
<th>Operational status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Helicopter</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Waterports</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Helicopter</td>
<td>31 [X]</td>
<td>[X]</td>
<td>[X]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Waterports</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R3 (2018 Apr)</td>
<td>Fixed-wing</td>
<td>[X]</td>
<td>[X]</td>
<td>[X]</td>
<td>[X]</td>
<td>[X]</td>
<td>[X]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Helicopter</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R4 (2018 Dec)</td>
<td>Fixed-wing</td>
<td>[X]</td>
<td>[X]</td>
<td>[X]</td>
<td>[X]</td>
<td>[X]</td>
<td>[X]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Helicopter</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R5 (2019 Apr)</td>
<td>Fixed-wing</td>
<td>[X]</td>
<td>[X]</td>
<td>[X]</td>
<td>[X]</td>
<td>[X]</td>
<td>[X]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Helicopter</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R6 (2019 Dec)</td>
<td>Fixed-wing</td>
<td>[X]</td>
<td>[X]</td>
<td>[X]</td>
<td>[X]</td>
<td>[X]</td>
<td>[X]</td>
<td></td>
</tr>
</tbody>
</table>

Issues

Poor infrastructure including lack of operational readiness of airports in remote areas and lack of availability of bays in the private airports in the large metro cities, shortage of pilots, lack of favourable rules and still pending reforms in DGCA (aviation regulator), and AAI rules and regulations are the main hurdles, most of these the government is responsible for (c. 22 Dec
Situation will get worse as airlines plan to add 900 aircraft, such as IndiGo 448 (399 A320s and 49 ATRs by 2028 to its existing 150 aircraft), SpiceJet 157 (107 B737-800s and 50 Bombardier Q400s during the 2018-2023 period to its existing 57 aircraft), GoAir 119 (A320 during 2018-2022 to its existing 34), AirAsia 60 (by 2025 to its existing 14), Air India 19 (3 B777-300ER and 16 A320 planes by March 2019 to its existing 155), Zoom Air 19 (5 CRJ-200 and 14 CRJ-900 planes to its existing 2), Vistara 5 (to its existing 17) and TruJet 6 (ATR72-500/600 during from 2018-2022 to its existing 4). AAI announced that as the part of its ₹ 200,000 million (equivalent to ₹ 210 billion or US$ 3.0 billion in 2018) infrastructure upgrade plans over next 4 years (2021) it will add 273 bays at 24 major airports against the industry requirement of 300 overnight parking bays at 30 airports in next 5 years (c. December 22, 2017). The solution lies in the policy intervention such as reserving at least 25% bays for the regional routes at the metro airports.

### 1.2 TYPES OF AIRLINES – SCHEDULED AND NON-SCHEDULED FLIGHTS/AIRLINES

#### Scheduled Airlines

Scheduled airlines, like the major flag carriers, operate flights according to schedules drawn up to cover several months or even years at a time. These airlines are thus committed to flying the planes for the said periods on the said routes whether they are filled or not. In so doing, they offer a predictable range of services and can thus be booked up to 1 year in advance in some cases. Also, they nowadays often operate in codeshares with other carriers to offer even more services but, to do so, the importance of keeping to schedules is emphasised. Scheduled flights are thus preferred by most travelers, especially business flyers.

![Schedule National Carrier – Air India](image)

#### Non-scheduled Airlines

A Non-scheduled airline is a company that offers unscheduled air transport services of passengers or goods at an hourly or per mile/kilometer charge for chartering the entire aircraft along with crew. A non-scheduled airline may hold domestic or international licences or both and operates under the regulations prescribed by its respective Civil Aviation Authority.
Introduction to Airline Industry

Charter Aircraft

While scheduled airlines are facing significant demand growth, the General Aviation (GA) industry has not been very successful. As per DGCA, the number of operators with the Non-Scheduled Operator’s Permit (NSOP) reached a peak of 147 in FY 2012 which has since reduced to 111 in FY2018. The present ownership pattern indicates a fragmented sector with most of the operators owning 1-3 aircraft. Such small fleet result in higher cost of operations and compliance.

The NSOP fleet in India comprises around 356 aircraft, including helicopters. This is down from a peak of 412 aircraft in FY 2012. Of the total 35 non-scheduled international operators, the top 15 operators accounted for more than 80% of the total number of international flights operated in FY 2018. Of the total 76 NSOP domestic operators, the top 15 operators accounted for more than 60% of domestic flights operated in the year FY 2018.

In addition to the NSOP fleet, there are 134 fixed-wing aircrafts and 48 helicopters registered with DGCA as private aircraft as of July 2018.

In contrast, UK has over 20,000 GA aircraft using over 1800 aerodromes. US has several times the UK fleet flying to over 5200 aerodromes.

The biggest challenge faced by the GA industry is the infrastructure deficit especially at major airports such as at Delhi and Mumbai. This is where a majority of owners and clients of
GA live and work. Since preference is given to scheduled airlines in the morning and evening peak hours, the curfew hours imposed on GA renders the mine effective. The planning and roadmap for aviation infrastructure so far has not taken note of GA requirements.

Added to these, high ATF taxes and airport charges, shortage of hangars and parking slots, etc. and one can understand why GA in India never really took off.

As seen in the graph below, annual GA aircraft movements have remained nearly static over the last nine years, below the 300,000 movements per annum mark. This is in sharp contrast to the traffic growth being witnessed in commercial aviation.

![GA aircraft movements and growth graph](image)

The high taxes and charges imposed on GA are primarily due to its branding as a ‘luxury’ item. This is very similar to how commercial aviation was looked at, less than two decades back.

The current users of GA are the primarily the rich and powerful – politicians, industrialists, corporate executives and celebrities. Given its elitist tag, any support to GA is perhaps considered politically risky. It therefore continues to remain a high cost luxury; out of reach for most middle class Indians. The elitist tag remains a self-fulfilling fallacy.

GA aircraft are the biggest catalyst of regional connectivity. They are the first to land at small airfields in small towns that have significance due to a manufacturing plant, mine, port or tourist location. It is only after the small town achieves prominence that regular airlines venture there.

For ‘Make in India’ to succeed, GA needs to be promoted in big way so that investors, bankers and executives can travel between the headquarters, and the production and logistics centers seamlessly without wasting hours on the road, some of which may pass through unsafe and unsecured territory.
Once the value of GA is realised, appropriate steps need to be undertaken to make it affordable and reliable. There are GA booking portals that are aggregating demand and managing the fleet of small GA operators. This, along with fractional ownership of aircraft, is likely to give a boost to the GA industry in India.

Import of private jets incurs basic customs duty and a GST of 28%, while a non-scheduled operator (NSOP) has to pay basic customs duty plus 18%. Leading aviation powers like US, UK, Australia and Japan impose zero import duty on GA aircraft.

No wonder, we have fleet of less than 150 private jets, despite a huge need and purchasing power that exists in India. With almost zero imports, the government in turn gets almost nothing by way of tax, making it look like a self-goal.

The tax differential between private and NSOP aircraft ensures that most private buyers import an aircraft under the NSOP category. A large number of NSOPs have single aircraft fleet, which creates a huge pressure on DGCA in terms of monitoring and oversight.

According to media reports, the MoCA is considering allowing different owners and operators for private jets. This would allow a private entity to purchase an aircraft and hand it over to an aircraft management company to maintain and operate it on mutually agreed terms.

Helicopters

Given their versatility, helicopters have a far wider range of applications than fixed-wing aircraft. These include intra- and inter-city commuting, cargo, air ambulance, law enforcement, search and rescue, tourism, firefighting, agriculture, media and entertainment, etc. Most of these have tremendous potential in India.

Ironically, the whole of India has just around 319 helicopters. They are distributed among NSOPs (229), private entities (48) and government entities (42). In comparison, just one city in Brazil – Sao Paulo – has over 700 registered helicopters and over 500 helipads. USA is far ahead with over 14,000 helicopters.
According to industry sources, over 70% of the flying hours of the Indian helicopter fleet is accounted for by just around 40 helicopters deployed in the offshore oil rigs. According to DGCA, out of 52 non-scheduled helicopter operators, the top three – Global Vectra, Pawan Hans and Himalayan Heli – services accounted for more than 70% of the total number of flights operated in FY 2018, indicating that other operators are severely underutilised.

Religious tourism in India draws millions of people across different income strata. Since many of the religious destinations involve a strenuous trek over difficult terrain, heli-taxis have a huge potential, especially for senior citizens, children and the differently abled. The success of heli-taxis at the Vaishno Devi shrine is an eye-opener. It needs to be replicated all across the country.

**Amphibious Aircraft**

With a coastline of over 7516 km and 246 islands, India has tremendous potential for coastal tourism. Plus it has vast lakes and rivers. Countries with far less have done much better in terms of tourism revenue and jobs. One reason has been an ear absence of amphibious aircraft in India.

Amphibious Aircraft

Many of the high potential coastal spots are located far off from the nearest airport, highway or railway station due to terrain issues or shortfalls in planning. Amphibious planes help us leapfrog from coast to coast or airport to coast and back. Given the small weight, amphibious aircraft can operate from very small regional airfields with minimal infrastructure. NCAP 2016 has rightly highlighted amphibious aircraft as an opportunity area and provided policy support.

1.3 **AIR CARGO TRANSPORT**

In India, the air transport industry contributed about US$ 30 billion annually to India’s GDP, and directly employed more than 390,000 people while supporting another 570,000 in the supply chain as per the July 2016 study carried out by Air Transport Action Group (ATAG).
Introduction to Airline Industry

Air cargo transportation drives economic and social growth, and supports and accelerates global trade, with an estimated 35% of value of global trade carried by air, though it accounts for less than 1% by volume. More recently, it has been supporting e-commerce with global majors like Amazon and Uber now taking up own air freight operations while initiating plans to use the next-gen Vertical Takeoff and Landing (VTOL) aircraft for their aggregation and door-to-door distribution operations. The role of air cargo is enormous in time-sensitive products such as agri perishables, horticulture and floriculture, marine products, pharmaceuticals, electronics, fashion garments, etc. and even greater for trade in advanced industrial, high value goods, and other sectors that rely on rapid, reliable and secure transport. Growth in air cargo is also critical for the financial sustainability of airlines given the importance of revenues realised from it. In 2017 as per IATA, globally airlines transported 59.9 million metric tonnes (MMT) of goods valued at US$ 5.6 trillion.

Air cargo handled at Indian airports grew by more than 20 times from 0.08 MMT in 1972-73 to 2.5 MMT in 2014-15. During the period 2013-14 to 2017-18, it accelerated sharply and grew with a CAGR of 10.0%. International cargo comprises of 60% of total air cargo tonnes handled in India and grew at 15.6% in 2017-18. Domestic cargo grew by over 8%, which reflects the skewed modal mix in which roads account for over 60% of cargo transportation as compared to the global average of around 30%. Indian express industry is one of the fastest growing market globally, but with a small share of about 2% of the global market. This industry grew at 17% CAGR over the past 5 years and was estimated to be INR 22,000 crore in 2016-17. Domestic express industry, a key constituent of the Indian express industry, is estimated to be worth INR 17,000 crore. International express is estimated to contribute INR 5,000 crore (23% by value) to the Indian express industry. Transshipment cargo which constitutes about 60-70% of total volumes handled by some of the leading global airports is quite low in India.
The Government has taken several initiatives to cope with the burgeoning traffic of cargo and to bring the country’s logistics on par with global standards. The Ministry of Civil Aviation undertook a Dwell-Time study conducted at six major airports to identify the reasons for higher dwell time in Indian Airports and corrective action(s) required, and acting upon its recommendations it has progressively worked to reduce import air cargo dwell time from 72 hours to about 52 hours by December 2017. Estimates by IATA for the 11 major airports on the average time taken for delivery of cargo and documents from the arrival of the airline to the customer suggests that by December 2018, the dwell time had further reduced to about 39 hours for imports as below:

The Indian air cargo industry is poised for significant growth on the back of both the strength of India’s economic growth and many other drivers of growth in India’s commerce, trade, investment and consumption, which include significant demand from small and medium B2B segments. However, the magnifier impact of lower air freight costs is as yet not adequately seen. Logistics costs in India comprise about 13-14% of GDP as compared to 7-8% in developed countries which has also hampered the growth of air cargo logistics industry. A strong impetus has been provided through the holistic National Civil Aviation Policy 2016, which has included a
number of initiatives for achieving growth of cargo volumes to 10 million tonnes by 2027. Open Sky Policy for air cargo and improved international connectivity coupled with expanding cargo-handling infrastructure, both physical and digital have sustained the high growth of air cargo in India in the last few years. As per the Boeing 20-Year Forecast, while global air cargo would reach 509 billion Revenue Tonne Kilometers (RTKs) by 2035, i.e., twice that seen in 2015, at an annual average rate of 4.2%, Asia will lead the growth, with domestic China, intra-Asia, and Indian market expanding at the highest rates of 6.2%, 5.5% and 6.7% p.a. respectively, as shown in the graph below.

Going forward, it is felt that the focus on improvement in the Ease of Doing Business in India coupled with landmark Government of India initiatives like ‘Make in India’, and ‘Digital India’, coupled with suitable policy, logistics, regulatory, and skills regime will all contribute to facilitating accelerated growth in air cargo. Simplification, modernisation and harmonisation of export and import processes as well as of the end-to-end domestic supply chains are an important issue. The WTO’s Trade Facilitation Agreement (TFA) encompasses several provisions for ensuring expedited movement, release and clearance of goods, and sets out measures for effective cooperation between customs related authorities on trade facilitation and customs compliances. India has adopted a WTO-plus Plan of Action to implement the commitments arising from the TFA.

Globally, air transport is a highly dynamic industry, and in this regard, the industry in India is no different. As markets evolve and customer demands change, air cargo operators must constantly review and update their operations and product offering to ensure that they continue to meet the market need. Accordingly, the Ministry of Civil Aviation has now articulated its vision for the comprehensive National Air Cargo Policy in the sections below which support the sustainable acceleration of the air cargo industry in India and ensure global competitiveness with performance benchmarking and monitoring.
National Air Cargo Policy (NACP)

NACP – Overview

➢ To leverage the Indian air cargo network to provide cargo transportation by air to the masses at an affordable cost and to connect every village to the national and global supply chain.

➢ To make air cargo and logistics in India the most efficient, seamless, and cost- and time-effective in the world over a period of 10 years.

NACP Mission Statements

➢ Whole of the trade value chain view while implementing reforms across multiple logistics and trade and multiple institutions/departments. The policy shall be fair to all supply chain participants, ensuring each stakeholder group’s concerns and issues are addressed where possible.

➢ Integrate with global supply chains/value chains to optimise domestic and international freight.

➢ To ensure seamless movement of cargo at all the airports, tail-to-tail transfer of domestic and international cargo to reduce turnaround time, establish standard/uniform business processes by standardising gate-in/gate-out processes and the broader trade (approvals, documentation, timelines, etc.) processes across airports/water ports/land ports/rail ports.

➢ To increase process transparency whilst decreasing shipment delays, costs and dwell time, a fully automated paperless trade environment with minimum face-to-face interactions will be implemented. Each process step involved in trade from pre-arrival processing/shipper’s gate to clearance and out of charge/consignee’s door to be actioned through a digital platform. The process to avoid the submission of paper documents and to not rely on physical signatures. Payments, communication, exchange of information, etc. to all occur digitally.

➢ Common shared goal of transformation among all stakeholders – government departments, public sector and private sector.

➢ Encouraging greater participation of women in the global and domestic air cargo chains.

➢ Engage start-ups in the cargo development.

NACP Objectives

The policy details out clear metrics on which the air cargo efficiencies will be measured, create key performance indices that monitor the policy execution. These have been developed by bringing all stakeholders in creating this ecosystem. All organisations in the air cargo ecosystem come under the auspices of an overall strategic organisation that has been formed to realise these objectives.

The policy covers all three categories of air cargo transport: domestic cargo ensuring efficient flow of goods across India; international cargo facilitating all indigenous export and import of goods; and transit international cargo by making India the transit cargo hub of choice to
and from other parts of the globe. The policy covers development and growth of all types of cargo.

**Policy Mandates**

Integrating post offices to the air cargo value chain at the village post office level. The domestic and international air cargo network will dovetail with the postal network through a common user platform to provide first and last mile connectivity for air cargo. Any air logistics company will be able to connect with the Postal Network based on a pre-defined connectivity interface. This will connect villages to both the urban domestic market and international markets providing free flow of goods through air cargo. Air cargo carriers to be able to transport mail aligned to processes implemented for the carriage of air cargo and emerging IATA-UPU standards.

Development of regional and state cargo hubs which will act as gateways for the region and states, connected by domestic trade corridors to production hubs.

Leveraging India’s geographical location as a transit hub between Europe and South East Asia and a gateway to the South Asian region. Additionally, a process of performance monitoring and continual assessment of national and international best practices shall be instrumented to ensure constantly improving processes are applied. Internationally recognised benchmarking standards will be monitored to assess performance.

Simplify trade by taking all steps required to reduce the dwell time of cargo at airports. Cargo transport will be made seamless and simplified by progressively replacing paper interaction with digital transactions that ensure automatic, timely and reliable exchange of information across all stakeholders.

Reduce time and cost to trade, reduce cycle times and eliminate revenue leakage by optimising and digitising each of the process within and across stakeholders, embracing global e-Cargo initiatives refining them to suit Indian context.

Effectively realise the real benefits of digitisation by integrating digital platforms across stakeholders. Re-engineering current processes, eliminating inefficiencies and digitising industry best practices.

Within the AERA approval mechanism and mandate, with a view to create tariffs which are cost-effective, reward investment and are simple to understand by all users, institute an efficient and transparent air cargo tariff process and where possible of all the other stakeholders in the Air Cargo supply chain.

Shift towards fully facilitated “trust-based” clearance processes through state-of-the-art RMS with robust scanning and identification methodology. The process to result in physical inspections only for those cases where the risk is elevated. Cargo clearances, including those related to part shipments, will be significantly automated with human intervention required on an exceptional basis. To enable the fast and efficient flow of goods within and across the country, the clearance workflow to begin in advance of the goods entering the country or before tendering of exports.
Introduction to Airline Industry

Continuously monitor logistics metrics at national and sub-national levels, including ranking of major air freight routes on key trade and logistics parameters. All policy initiatives to be clearly measurable with agreed metrics among relevant stakeholders, made visible and have established proactive rectification steps designed to remedy service and performance failures before breaches occur.

Cooperative and competitive federalism (ranking framework) to incentivise State Governments: Institute a State ranking framework with identified and agreed metrics with benchmarks to be clearly defined.

Encouraging the deployment of the latest technology to reduce costs and maximise efficiencies and digitalisation. Use of latest technology for intelligent air cargo logistics including Internet of Things (IoT), Artificial Intelligence (AI) and Block Chain. It is designed to be technology neutral but encourages developments to consider global standards, highest levels of data security and privacy protections with efficient, and agile architecture. Data access must be controlled, and duplication of process and data inputs avoided.

Key Government Agency Stakeholders

This policy document encourages the timely convergence and integration of actions across departments in order to facilitate the goal of ensuring that India has the most efficient and effective air cargo infrastructure and system in place to support export, import and domestic cargo movements.

A mechanism will be established to record trade feedback regarding the key pain points and challenges faced by trade on a day-to-day basis (distinct from inter-stakeholder grievance redressal) for facilitating development of India as top cargo transport region for domestic and international cargo.

- Ministry of Civil Aviation
- National Civil Aviation Policy
- Air Cargo Logistics Promotion Board (ACLPB)
- Directorate General of Civil Aviation (DGCA)
- Bureau of Civil Aviation Security (BCAS)
- Airports Economic Regulatory Authority of India (AERA)
- Airports Authority of India (AAI) and other privatised airports as they arise as a terminal operator
- AAI Cargo Logistics and Allied Services Company Limited
- Air Freight Stations (Off-airport)
- Air India (or elected representatives of airlines handling air cargo in India)
- Pawan Hans Limited

Other Governmental Agencies

- Central Board of Indirect Taxes and Customs responsible for administering Customs, GST, Central Excise, Service Tax and Narcotics in India.
- FSSAI and Other Participating Government Agencies (constituents of Single Window).
- Other PGAs as required.

### 1.4 REGULATORY POLICIES IN SUPPORT OF AIR CARGO GROWTH

**National Integrated Logistics Policy (NILP)**
- Policy to focus on increasing the capacity of storage and warehousing, and other value-added services. Multimodal logistics parks and integrating various transportation modes are also being developed right up to the district level.

**EXIM Policy**
- Logistics Development and boosting trade is an integral strategy of the overall economic development vision of the Government. The Foreign Trade Policy 2015-20 envisions making India a significant player in the global trade landscape by 2020. The policy targets doubling India’s exports from 2014 levels to about US$ 900 billion by 2020 and raising India’s share in world exports from 2% to 3.5% by that year.

** Preferential and Free Trade Agreements as a Driver for Air Cargo**
- Multilateral, Plurilateral and Bilateral agreements such as the Marrakech Agreement, establishing the World Trade Organisation (WTO), South Asian Free Trade Agreement (SAFTA) and BIMSTEC.
- Reducing/removing trade barriers.
- Impacts on Cross-border Management.
- Provide more access for local goods to international/regional markets.
- Development of Trade Corridors with major international trading partners, facilitating customs clearance at origin for speedy movement of cargo by air particularly for high value shipments.
- Addressing issues relating to directional imbalance of import and export cargo volumes to make certain potential international trade routes viable.

**Air Service Agreements and Promoting Cooperation with International Airports**
- An air transport agreement (also sometimes called an air service agreement or ATA or ASA) is an agreement which two nations sign to allow international commercial air transport services between their territories. To leverage the ASAs or ATAs for air cargo growth, specific considerations to be given at the time of their negotiation and implementation.
- To develop a shared interface between their respective air cargo community systems, international air cargo corridors with pre-customs clearance at origin facilities with major trading partners particularly for high value air cargo. Development of digital air cargo corridors between Indian Airports and Major International Airports for establishing automated data exchanges.
Facilitating Freighter Growth – Air Cargo full freighter operations have not developed as was expected and continual efforts through new policies/incentives need to be devised to provide a favourable environment to support growth.

Aligning with International Standards to Secure and Facilitate Trade

- ICAO Annex 19 (Standards and Recommended Practices) which stipulates consolidation of existing safety management provisions and development of enhanced requirements for safety management of the cargo being moved.
- WCO Harmonised System (HS) Code which helps reduce the chances of misinterpretation of product/commodity and also makes accurate application of local tax rates.
- WTO Trade Facilitation Agreement that aims to simplify customs regulations for the cross-border movement of goods produced at the WTO’s 9th Bali (Indonesia) ministerial package of 2013. The TFA includes provisions for enhancing international trade whilst lowering border management costs associated with complex and unharmonised processes.
- WCO Advanced Cargo Information programme which provides both public and private trade operators with comprehensive electronic cargo information filing standards for submission in advance of the arrival of the goods in the country of importation, to aid processing and clearance.
- WCO SAFE Framework of Standards that provides baseline international standards to secure and facilitate global trade.
- WCO Authorised Economic Operator Programme wherein an AEO is a party involved in the international movement of goods in whatever function that has been approved by or on behalf of a national customs administration as complying with WCO or equivalent supply chain security standards. The AEO programme will be suitably modified to suit the operational requirements of various stakeholders involved in the air logistics supply chain including regular cargo, express cargo and specialised cargo.
- ICAO Regulated Agent/Known Consignor (RA/KC) programmes designed to certify entities meeting aviation security standards in operation.
- OIE Terrestrial/Aquatic Animal Health Codes which includes standards for the improvement of aquatic animal health worldwide.
- ISAGO (IATA Operational Audit for Ground Operations), a backbone of Audit Standards applicable to ground handling companies, ensuring safe ramp and terminal operations.
- Packaging requirements for Air Cargo and Dangerous Goods as adopted by ICAO and other regulatory authorities.

Developing Roadmaps

Developing roadmaps on:

- Suitably addressing removal of airport infrastructure bottlenecks for air cargo growth, including adequate land side and air side facilities and approach roads. Increasingly
pharmaceuticals, perishables, new e-commerce products, PO mail and Courier require a holistic cargo village concept that facilitates optimal cargo flow at airports. Airport operators to be encouraged to provide the necessary infrastructure to support cargo operations to cater to each specialised air cargo segment.

- Encourage use of latest technology, packaging material and equipment suited for each specialised cargo segments.
- Efficient usage of Drones for time-sensitive delivery such as human organs, blood samples, etc.
- To boost export of perishable agro items and pharmaceuticals, air cargo service entities will be encouraged to develop an effective catchment area based specialised road feeder service network.
- Efficient aircraft financing/leasing programmes will be encouraged ensuring air operators have access to cost-efficient programmes which support fleet investment and growth.
- Manufacturing aircraft, helicopters, seaplanes, Remotely Pilot Aircraft Systems (RPAS) and associated equipment for handling air cargo.

**Air Cargo Research and Development**

A well-equipped Research and Development Center for Air Cargo that can plan, coordinate, implement and monitor air cargo traffic and support the development of appropriate solutions.

- Data compilation, generation and analysis – encouraging the development of robust IT system which integrates all required data and presents to authorised parties in a secure and controlled environment.
- New technologies – The Air Cargo Industry needs to adopt the latest technological standards to have an optimal resource utilisation and increasing efficiency which will help increase revenue for all the stakeholders.
- New supply chains/commodities need to be developed to facilitate ease of doing business and promote the use of Air Cargo as a preferred mode for outbound or inbound movement of cargo, both domestic and international.
- To encourage investment, suitable tax treatment on R&D expenditure – Weighted deduction at suitable rate of R&D expenditure to be considered based on R&D expenditure.
- Development of advance packaging and pallet technology.
- Development of Regulatory Procedures (enabling “Next” Practices at Airports and associated cargo ecosystems) and streamlining, harmonising and standardising all the regulatory processes with time-bound approvals for regulatory permissions.
- All required regulatory agencies such as TTC, P&Q, ADC and FSSAI to be present at all major cargo terminals with adequate posting of their respective staff, to support enhanced and efficient cargo processing.
- An environment of trust-based partnership and cooperation to be developed either through AEO, RA or any other means. Tighter Operator Certification Protocols shall be
developed for Air Cargo Operators in the supply chain which allow them faster clearances and cargo processing.

- The ACLPB to set up an inter-ministerial body for planning, coordination, implementation and monitoring which is a must for making the policy functional.
- The ACLPB in consultation with the Department of Industrial Policy and Promotion (DIPP) will develop policies to support the growing business area of e-commerce and any other growing business areas in consultation with relevant Governmental Departments.
- All cargo related activities will be conducted within the cargo processing area, suitably earmarked within the Airport. All cargo handling activities within the ramp/air side will be within the purview of the Ground Handling Agency (GHA).
- To support timely access to aircraft parts, components and consumables needed by Indian MRO entities.
- Policies to be established to support inter-modal operations for effective connectivity of air with sea, road, rail, inland waterways supply chains. Multimodal Freight corridors, to be further developed, to connect Indian suppliers and consumers with domestic and international major trading centers.
- Encourage Air Cargo Community to utilise the 24-hour access to cargo clearance services. Ensure suitable deployment of personnel by regulatory agencies as well as certification testing labs and other facilities in the vicinity of the Airport on Air Cargo catchment area basis.
- Suitable economic policies to be in place, including AERA oversight and approval of Air Cargo handling services to ensure that cost-effective cargo operations are possible.
- GST and other economic legislation to be reviewed by the appropriate government agencies to ensure effective measures are in place to support the national air cargo development strategies.
- Consideration to be given by ACLPB to strengthen cooperation and consideration between international and domestic carriers to effectively utilise their hubs. Furthermore, policies to establish international cargo trade lanes, including hub-to-hub trade lanes, to be implemented.
- All the courier cargo clearance to be done on ICEGATE platform through an immediate extension of the software to cover courier cargo clearances.
- In order to encourage creation of cargo infrastructure at the airport and off-airport Air Freight Stations, a waiver from Customs Cost Recovery charges shall be considered to be granted for the first 5 years, provided that in the case of new custodians in the North East region, other hilly areas and remote areas, the waiver from Customs Cost Recovery shall apply without any termination clause. All old and existing custodians shall be considered to be granted a waiver from Customs Cost Recovery charges as long as they fulfil the new norms to be developed for each category of custodian and such waiver shall be, with prospective effect. All underserved and unserved airports within the meaning of the RCS UDAN Scheme shall not attract Customs Cost Recovery charges.
Master Planning norms for Brownfield and Greenfield airports shall have specific reference to the Cargo Infrastructure planning on the basis of actual user consultation and further that the layout and design of the cargo infrastructure at the airport shall be conducive for cargo movement and help in optimal utilisation of time, space and resources leading to efficiencies.

**Air Cargo Market and Development Strategies**

**Short-term Goals for India**

- Top 5 global air freight market by 2025.
- Rank in the top 5 globally based one-AWB penetration by 2025.
- Rank in the top 25 globally based on the Logistics Performance Index, which is an interactive benchmarking tool created by the World Bank to help countries identify the challenges and opportunities they face in their performance on trade logistics and what they can do to improve their performance.
- Air cargo transshipment hub at all major airports by 2025.
- Region-wise warehouses and hubs linked to regional airports for e-commerce cargo, agro and other perishable cargo, and any other specialised cargo to supplement the resources for effective utilisation.
- Invest in emerging cargo markets like Africa, South East Asia, etc. The potential in the new markets needs to be explored with long-term infrastructure creation in order to sustain cargo growth in the next 10-15 years at least. Policies need to be devised in order to execute the plans.

**Air Cargo Market Behaviour**

- Leveraging speed – Understanding what commodities need to move via air. Unless market study of the same is carried out, the unexplored market cannot be captured. This is variable and ever changing/dynamic.
- Leveraging expertise – Understanding special handling requirements for all types of cargo.
- Leveraging resources – Understanding local products that can impact global trade.
- Shift in customer behaviour – Understanding the change in buying preference of the consumer. It is one of the critical requirements to have a sustainable air cargo growth as exports/imports largely depend on it.

**Regional Freight Development (RFD)**

- Establish agreements between national carriers/freighters and integrators to improve domestic connectivity. In the absence of same, there may not be effective utilisation of air space. Domestic connectivity is one of the major reasons for major air cargo terminals to grow in the world.
- Encourage the establishment of agreements between national and international carriers/freighters and other airline operators to provide access to key global cargo hubs. Regulatory policies and streamlining of transshipment procedures to support seamless
transshipment of air cargo from domestic to international flights and *vice versa* on a tail-to-tail basis for quick and cost-effective turnaround.

- Support the establishment of regional aggregation/distribution centers to cope with the increase in B-to-C and C-to-C transactions/roadmap for development of lead districts.
- Promote the development of a last mile/first mile connectivity programme at international/ regional gateways.
- Encourage code sharing/inter-line agreements between foreign and Indian carriers.
- Focus on commodity-based requirements and needs in the infrastructure development plans for all the regions.
- Promote use of air freight by regional and national air cargo aggregators.
- Promote aggregators for smaller consignments/from SMEs.
- Each State to nominate at least one airport for air cargo operations under RCS.

**Multimodal Integration**

- Leveraging Multimodal Logistics Parks network/ICDs/CFSs. Multimodal Logistics Park (MMLPs) is a key policy initiative of the Government of India to improve the country’s logistics sector by lowering overall freight costs, reducing vehicular pollution and congestion, and cutting warehousing costs. The Central Government, through the Ministry of Road Transport and Highways (MoRTH), is developing multimodal logistics parks at selected locations in the country under its Logistics Efficiency Enhancement Programme (LEEP).
- Harness the Air Cargo potential associated with integration of industrial parks set up by the State Governments and other industrial clusters established through SEZs/EOUs, etc. with MMLPs/ICDs/CFSs/AFSs.
- Establish a programme to provide a seamless inter-modal integration, including interface of National Air Cargo Community System (NACCS) with the National Logistics Portal and Port Community System (PCS) and systems, that may be developed for rail, road and inland waterways transportation.
- Improve MSME/small market connectivity to airports through RFD.
- Develop common development plans for multimodal integration projects in consultation with the relevant Ministries/Departments for the modes of transportation concerned to ensure optimal coverage of all issues.
- State and Central Government support through the Nodal Ministry/Department required to develop City Master Plan to offer multimodal connectivity to existing and upcoming airports/AFSs.
- To support the development of effective transit and transshipment hubs, leveraging India’s geographic advantage, and specific projects and initiatives.
- To support effective AFS, guidelines to be established to ensure smooth and viable AFS operations, including sterile corridors when security integrity has been ensured at and from the AFS.
Security Strategy

The strategy will address security related to the physical cargo, people handling the cargo, data and information related to shipments within and across all chains of custody transfers. Taking success factors from what has been implemented with government facilitation in Singapore and Amsterdam, for instance, these security measures will further facilitate removing inefficiencies in the process and promote air cargo growth. Recommendations from the Cargo Security Working Group (CSWG) of IATA will be considered by the ACLPB as appropriate.

- Strengthening security programmes without impacting cargo movement – Moving towards a state-of-the-risk management system designed to have fully facilitated clearances with inspection/checks becoming exceptions depending on risk profiles.
- Cases where the RMS recommends physical examination to be by and large minimal/exception – RMS system to be made robust enough to scan, identify and recommend physical inspection only for those cases where risk is a genuine concern. This vision will be realised by incorporating sophisticated risk assessment techniques that minimise exceptions and thereby the need for human intervention.
- Establish a Known Consignor Programme and strengthen the Regulated Agent/Authorised Economic Operator Programmes.
- Philosophy of processing to be to put greater reliance on “trust” and acceptance of “self-declaration” under such programmes by KC/RA/AEO, with suitable safeguards and monitoring.
- Establish security protocols for all forms of Air Cargo.
- Mandating Pre-loading Advance Cargo Information for Imports.
- Promote adoption of the latest in Cargo Screening Technology.
- Ensure the use of internationally agreed standards for security declarations, including for direct access to Tarmac/ Apron in the cases of ULDs/Pallets when security integrity has been ensured at and from off-airport facilities.
- Assess the establishment of common use screening facilities designed to scan shipper-built ULD/Pallet consignments.

Safety Strategy

The safety strategy will cover all aspects of defining, measuring, improving and avoiding safety breaches in air cargo operations at all cargo handing areas of the airport, including land and air sides.

- Ensure cargo operatives follow industry best practices for operational safety.
- Ensure that all entities that handle cargo or are associated with it, implement a safety management system including risk management.
- Lithium batteries handling policy to be established aligned with international regulations.
- Contribute towards establishing and sharing an incident database.
- Establish oversight programmes to ensure all required parties have undergone appropriate Dangerous Goods training.
Increase ULD safety awareness to reduce incidents and damage to aircraft and cargo.

Ensure adequate ULD storage facilities are provided.

Ensure adequate CCTV and other monitoring solutions are implemented to safeguard cargo and operational area integrity.

Assess the use of industry safety and performance standards such as Cargo IQ and/or Cargo Service Quality measurements.

**Cargo Community Infrastructure**

The Cargo Community Infrastructure policies will include both physical and digital infrastructure that will facilitate efficient digital collaboration across all stakeholders to ensure the smooth processing and flows of air cargo to and from airports and off-airport facilities.

ACLPB will review specific policy requests emanating from trade or supply chain participants and will make appropriate recommendations to Government for policy adoption.

- Master Plan for Current and Future Air Cargo Facilities (on- and off-airport) – Development of Master Planning Norms for Airports with specific reference to Cargo Infrastructure Planning, based on actual user consultation, keeping in view international norms.

- Major airports to have a cargo village, including common user courier/express cargo facilities.

- For long-term cargo development and growth of all types of air cargo, ensure appropriate multimodal connectivity in the master plan as well as the public transport in and around cargo movement areas.

- Provide/improve facilities, necessary training and operational standards for handling and developing specialised cargo.
  - Agri-produce/Marine/Horticultural – Develop an enabling air cargo policy and institutional environment for the private sector to support the development of agri and food supply chain.
  - Other perishables.
  - Express, e-commerce and time definite cargo.
  - Pharmaceuticals (Cold Chain).
  - Live Animals – Live Animals Regulations (LAR) is the worldwide standard for transporting live animals by commercial airlines. Whether it is a pet, an animal transported for zoological or agricultural purposes or for any other reason, the objective of the LAR is to ensure all animals are transported safely and humanely by air.
  - Dangerous Goods – Faster movement and clearance of such goods is desired to keep ambient conditions of the goods, viz., chemicals, explosives, etc. Special handling of such goods is required to avoid any incidents.