



KOSHYS

INSTITUTE OF MANAGEMENT STUDIES

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PRINCIPLES OF AIRLINE AND AIRPORT MANAGEMENT

UNIT: 1 INTRODUCTION AIRLINE AND AIRPORT MANAGEMENT

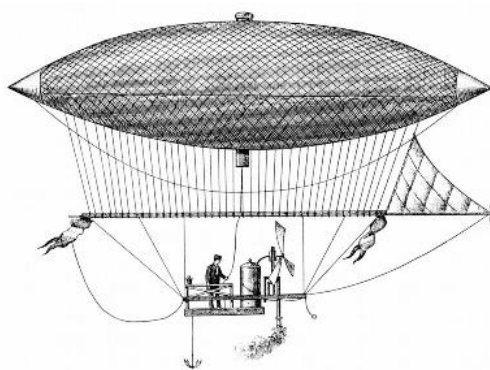
Faculty Name: AKSHATHA S

EVOLUTION OF AIR TRANSPORT/ HISTORY OF AVIATION

1783: The Montgolfier brothers launched their first hot air balloon.



1852: The first airship, fitted with a steam engine was flown by Henri Giffard from Paris. The airship could only fly forward.



1903: The Wright Brothers made the first engine powered flight in 'The Flyer'. It flew for 12 seconds and travelled 37 metres.

1915: The first all metal plane was built by a German, Herman Junkers. It travelled at 170 km per hour.

1926: The first sea plane, having one or two floats in place of the usual under carriage, this plane took off from, and landed on, water.



1930s: Flying boats were used to cross oceans because aircraft could not carry enough fuel to travel long distances non-stop. Flying boats could fly between seaports and islands, refuelling as they went. They didn't need runways, and it was thought to be safer to fly across water in an aircraft that could float. Flying boats have floats where the undercarriage would be on a land-based aircraft.

In the 1930s the use of twin (two) engines enabled planes to carry more passengers.

1940: The first practical helicopter which could carry passengers was developed. Before this, a helicopter that could get off the ground and move in all directions was invented by Russian-American Igor Sikorsky. His design used a large rotor on top for lift, and a tail rotor to keep the craft steady, flew in **1939**.

The word 'helicopter' is made of two Greek words: *helico* meaning 'spiral' and *pter* meaning 'one with wings'

1947: This flying boat, 'Spruce Goose' was built of wood. It only flew once, over a distance of about 2 kilometres. It is the largest plane ever built.

1950s: Early jet liners carried about 40 passengers, and had jet engines with propellers called turbo-prop engines.

The first jet engine was invented by British engineer, Frank Whittle in 1930

1952: Jet passenger planes had turbo-jets and no longer needed propellers.

1969: Commercial jet liners were able to carry over 400 passengers. After a disastrous crash in 2000, and other matters, Concorde was taken out of service in 2003.

1968: The Russian built Tupolev Tu-144 was the first supersonic passenger aircraft. It flew on December 31, 1968; two months ahead of the first flight for the Concorde SST. Concorde flew at speeds of up to 2100 kilometres per hour carrying 100 passengers.

1981: The first re-usable space vehicle, the space shuttle 'Columbia' was launched.

2005: The largest passenger aircraft, (so far!) the double-decked, Airbus A380 can carry more than 800 passengers.

2013: The 787 Dreamliner a long-range, mid-size wide-body, twin-engine jet airliner came into service. It can carry up to 250 passengers. It is a lighter and more energy efficient aeroplane.

DEVELOPMENT OF AIR TRANSPORTATION IN INDIA:

French pilot Monseigneur Piguet flew the first commercial flight in India from Allahabad to Naini on February 18, 1911. However, it wasn't until 1932 that Jehangir Ratanji Dadabhoy, the 'Father of Indian Aviation', established India's first licensed commercial carrier. Tata Airlines was based out of Mumbai and transported both mail and passengers across India. In 1946 it changed its name to Air India. Two years later, the Indian Government acquired 49% of the company, and fully nationalized the airline in 1953 pursuant to the Air Corporations Act, 1953. This law not only allowed the Government to gain control over the erstwhile Tata Airlines, but also nationalized the entire sector. All existing airlines were merged into either Indian Airlines Corporation or Air India International. This monopoly continued for the next forty years. It wasn't until the Indian economic liberalization of the 1990's that the aviation sector was again open to private participation.

- < 1953 Nine Airlines existed including Indian Airlines & Air India (Deccan Airways, Airways India, Bharat Airways, Himalayan Aviation, Kalinga Airlines, Indian National Airways, Air India and Air Services of India)
- 1953 Nationalization of all private airlines through Air Corporations Act
- 1986 Private players permitted to operate as air taxi operators
- 1994 Air Corporation Act, 1953 repealed. Private players permitted to operate scheduled airlines
- 1995 Jet, Sahara, Modiluft, Damania, and East West granted scheduled carrier status
- 1997 India's first Greenfield Public Private Partnership (PPP) airport developed in Cochin
- 1997 4 out of 6 operators shut down. Jet & Sahara continue
- 2001 Aviation Turbine Fuel ("ATF") prices decontrolled
- 2003 Air Deccan starts operations as India's first Low Cost Carrier ("LCC")
- 2004-5 Kingfisher, SpiceJet, Indigo, Go Air, and Paramount start operations
- 2007 Industry consolidates: Jet Airways acquires Air Sahara, Kingfisher acquires Air Deccan, and Air India acquires Indian Airways
- 2010 SpiceJet starts international operations
- 2011 Indigo starts international operations, Kingfisher exits LCC segment
- 2012 Government allows direct ATF imports, FDI allows for foreign airlines to hold up to 49% stake in scheduled and non-scheduled air transport services while NRIs are permitted to hold 100% equity in airlines
- 2013 Singapore-based Tiger Air enters into an interline agreement with Spicejet
- 2014 Air Asia (a joint venture between Tata Sons, Malaysia's Ais Asia Berhard, and Arun Bhatia's Telestra Tradeplace) and Vistara (a joint venture between Tata Sons and Singapore Airlines) enter the market

- 2014 Ethihad Airways purchases 24% stake in Jet Airways
- 2015 Indigo launches one of the largest IPOs (initial public stock offering) in Indian history
- 2016 Jet Airways to merge with JetLite in order to complete its exit from the LCC segment

MAJOR PLAYERS IN AIRLINE INDUSTRY

The airline management does not work independently of other competitors in the air transportation industry. Indeed, the decisions of airline management are extremely affected by these other competitors. The Figure 2.1 depicts the various entities that cooperate with airline management and influence the decisions concerning government, airports, customers, alliances, suppliers, unions and competitors.

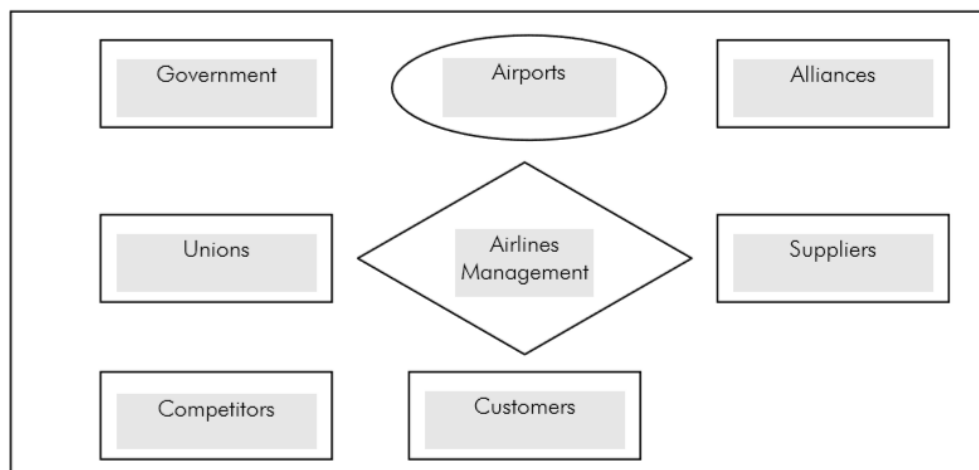


Figure 2.1: Different Players in Air Transport Industry

Firstly, the airline management must conform to the regulations of the airline's home country. It also takes into concern and conform with the government's rules and regulations of those countries where the airlines fly to and from, and whose airspace they cross. The governments usually watch the competition among airlines and control their strategic decisions, like merging, acquisition between carriers, entry or exit in the market and their pricing, environmental and security regulations, maintenance and safety requirements. Secondly, the airline management should consider all the agreement terms carefully with the different airports they serve. Various factors affect these agreements, including available infrastructure (i.e. gates, runways, baggage handling, etc.), expected traffic, airport charges and incentives, competition from close by airports, available landing slots, delays and congestions, and operational curfews. Thirdly, an airline should consider the requirements and preferences of its prospective customers, "the travellers". For example, the airline should consider the schedule convenience, competitive fares, on-board services, punctuality, and well-organized customer service. Failing to fulfil the requirements and preferences of customers might lead to losing them to other competing carriers or other modes of transportation. Fourthly, in several cases, an

airline participates in one or more alliances to enlarge its network coverage or share resources with other airlines. Various forms of alliance are available that reflect the level of cooperation among participating airlines. It is essential for an airline to decide which alliance to participate in and how to share its resources proficiently with each member in the alliance to encourage profitability. Usually, the airline has to retain a certain level of operating standards to serve within a worldwide alliance.

Fifthly, the suppliers are vital to the continuation of the airline's operation. Airlines depend on suppliers to provide significant items such as aircraft, fuel, meals, employee uniforms, spare parts, and so on. Also, in many cases, airlines outsource the vendors for some of their jobs and services, such as aircraft maintenance, aircraft cleaning, ground handling, sales. Hence, an airline has to keep strong relationships with its suppliers to continue operating fruitfully. Another unit in the air transportation industry that an airline has to deal with is unions. The different groups of workers form unions to achieve stronger negotiation authority with airline management with respect to salary, benefits, or working rules. To keep good relation with labour in order to guarantee the smooth operation of the business is one of the main objectives of airline management. The conflicts with unions might typically lead to negative actions by the unions, such as strikes or slowdown of work, which usually harm the operation of the airlines significantly.

Finally, in the majority of market, there is tough competition among several airlines. Usually, the airlines continuously examine the decisions of their competitors that relate to providing capacity, fare restrictions, fare levels, and departure times. In many situations, the competing airline's decision proceed in a leader-follower pattern, where one airline takes an action and the other competing airlines try to find the best way to react to this action.

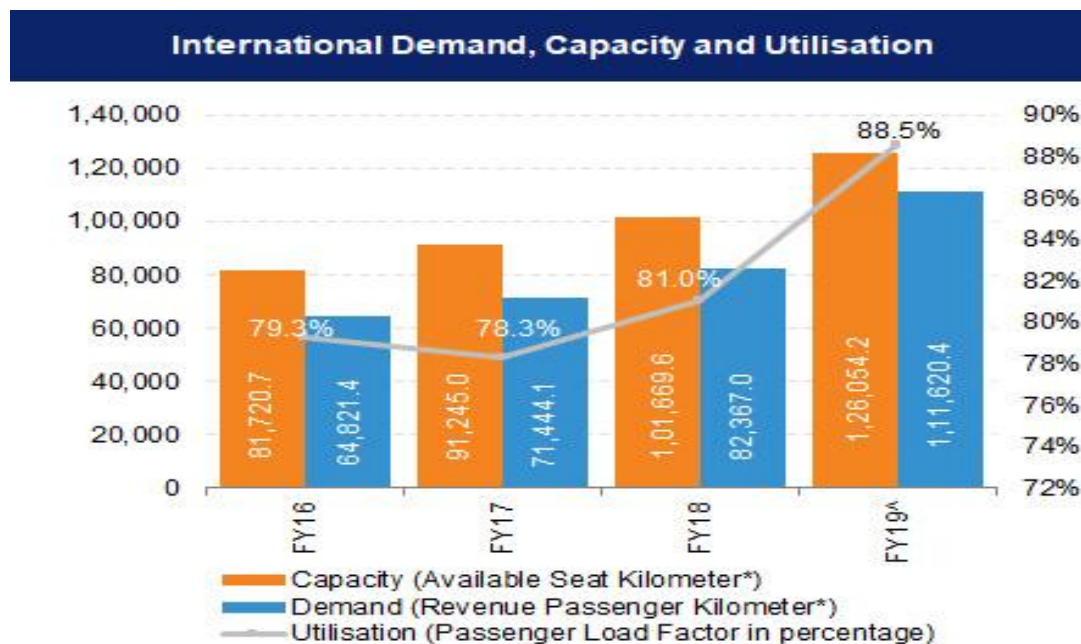
MARKET POTENTIAL OF INDIAN AIRLINE INDUSTRY

India is expected to overtake China and the United States as the world's third-largest air passenger market in the next ten years, by 2030, according to the International Air Transport Association (IATA). Further, the rising demand in the sector has pushed the number of airplanes operating in the sector.

The number of airplanes is expected to reach 1,100 planes by 2027. In FY23, airports in India pegged the domestic passenger traffic to reach 270.34 million, a 62.1% YoY increase, and international passenger traffic to reach 56.9 million, a 157% YoY increase, as compared to FY22.

Between FY16 and FY23, freight traffic increased at a CAGR of 2.20% from 2.70 MMT to 3.15 MMT. Freight traffic stood at 3.15 million metric tonnes in FY23. Freight traffic in

airports in India has the potential to reach 17 MT by FY40. In FY22, the number of aircraft movements stood at 1,757,112, and aircraft movements reached 2.5 million in FY23. To cater to the rising air traffic, the Government of India has been working towards increasing the number of airports. As of 2023, India has 148 operational airports. India has envisaged increasing the number of operational airports to 220 by 2025.



CHALLENGES FACED BY AIRLINE INDUSTRY:

Challenges of the aviation industry prior to the pandemic:

#1 Fuel Efficiency: Aviation fuel availability and costs have remained one of the major economic factors affecting the airline industry since nearly three decades. High jet fuel prices have a direct impact on the airline's financial portfolio. With the number of airline companies rising year-on-year, fuel prices were on an all-time high, creating a vicious circle. Alternative fuels haven't really been that impactful, thereby, maintaining fuel efficiency falls among a battery of key challenges of the aviation industry.

#2 Global Economy: The state of the world economy is one of primary challenges of the airline market. The 2008 economic recession for instance, had a disastrous impact on the aviation industry size. As global economy collapses, travel and fuel costs increase, while passenger numbers decrease. The impact of the recession on the tourism sector is also one of the key economic factors affecting the airline industry.

#3 Passenger Comfort and Experience: The aviation industry is service-driven; its success depends enormously on how satisfied passengers are.

#4 Airline Infrastructure: Airports must consistently upgrade their infrastructure – the runways, terminals, concourses, hotels, shopping centers, lounges, and more. There is major competition in this area; to maintain the reputation of the airline and remain ahead of competition, onsite amenities such as **aircraft ground handling systems** will need to be periodically renovated. While doing so occasionally is advantageous no doubt, leading to increasing passenger numbers, repeating the upgrade every now and then will have a significant impact on the airline company's finances.

#5 Global Congestion: A couple of decades back, air travel had been a luxurious affair; playthings of the rich, especially in the developing countries. The scenario has changed drastically, today, airports the world over are so crowded that it has led to unnecessary flight delays. Most flights seem full, terminals are always congested, and more importantly, the skies are overcrowded with the excessive number of aircraft. Air traffic and airport congestion are major challenges faced by the airline market

#6 Technological Advancements: To think that technological developments are one of the challenges of the airline industry may come as a surprise. Technology, however, is a double-edged sword, and despite the revolution it has brought about, rising dependence on the same can make the entire industry vulnerable.

#7 Terrorism: Tragic events from the past have created ripples of fear not only among the masses, but also airport personnel. Although terrorist activities have dimmed down in recent times, this is still very much a threat, as airline companies must remain consistently vigilant. Increasing fear of terrorism leads to stringent check-ins and consequently longer lines and delays. It also pressurizes airline companies to come up with highly secure state-of-the-art screening procedures and equipment.

#8 Climate Change: Without a shred of doubt, climate change and environmental issues have remained among the key challenges faced by the airline market since a very long time. Since commercial aviation is responsible for a considerable percentage of carbon emissions, the airline industry is under tremendous pressure to undertake measures that will reduce environmental impact of air travel.

COMPETITION IN THE AIRLINE INDUSTRY:

Competition in the airline industry can be intense and complex due to various factors such as:

- **Price Wars:** Airlines often engage in price wars to attract passengers. This can lead to price fluctuations and fare discounts to gain a competitive edge. Low-cost carriers

(LCCs) are known for their aggressive pricing strategies, which can influence the pricing dynamics in the industry.

- **Route Networks:** Airlines compete based on the breadth and efficiency of their route networks. Having an extensive network that connects multiple cities and regions can be a competitive advantage. Carriers may also focus on providing non-stop or direct flights on popular routes.
- **Service Quality:** While price is important, service quality is another critical competitive factor. Airlines differentiate themselves through the quality of their in-flight services, seat comfort, cabin amenities, and overall passenger experience. Full-service carriers often emphasize premium services and comfort.
- **Frequent Flyer Programs:** Many airlines have frequent flyer programs that reward loyal customers with points or miles that can be redeemed for free flights or other benefits. These programs can create customer loyalty and affect passengers' choices when selecting an airline.
- **Marketing and Branding:** Strong branding and marketing efforts are essential in the airline industry. Airlines invest in advertising, partnerships, and promotional campaigns to attract customers and establish their reputation.
- **Alliances and Partnerships:** Airlines often form alliances or partnerships with other carriers to expand their network reach and offer passengers access to a more extensive range of destinations. For example, the three major global airline alliances are Star Alliance, Oneworld, and SkyTeam.
- **Innovations:** Airlines compete by introducing new technologies and innovations. These can include in-flight entertainment systems, improved booking platforms, and environmentally friendly practices, such as using fuel-efficient aircraft.
- **Price Segmentation:** Airlines use price segmentation strategies, offering different fare classes (economy, business, first class) to cater to various customer segments. Business travelers may be willing to pay more for flexibility and premium services, while leisure travelers seek lower fares.
- **Regulatory Environment:** Government regulations and policies, such as open skies agreements and restrictions on foreign ownership, can influence competition within the airline industry. Some governments may protect their national carriers, while others promote competition by allowing foreign airlines to operate freely.

- **Economic Factors:** Economic conditions, including fuel prices, exchange rates, and overall economic stability, can impact competition within the airline industry. Fuel prices, in particular, can significantly affect an airline's operating costs and pricing strategies.
- **Mergers and Acquisitions:** Consolidation through mergers and acquisitions can reshape the competitive landscape. Large airlines may acquire smaller carriers to expand their reach or eliminate competition.
- **Start-Up Airlines:** New entrants, often low-cost carriers, can disrupt the market and challenge established airlines. These start-ups may enter with innovative business models and pricing strategies.



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PRINCIPLES OF AIRLINE AND AIRPORT MANAGEMENT

UNIT: 2 ICAO & IATA

Faculty: Prof. Akshatha S

ICAO (International Civil Aviation Organization)

ORIGIN:

The Second World War was a powerful catalyst for the technical development of the aeroplane. A vast network of passenger and freight carriage was set up during this period, but there were many obstacles, both political and technical, to evolving these facilities and routes to their new civilian purposes.

Subsequent to several studies initiated by the United States, as well as various consultations it undertook with its Major Allies, the U.S. government extended an invitation to 55 States to attend an International Civil Aviation Conference in Chicago in 1944.

These delegates met at a very dark time in human history and travelled to Chicago at great personal risk. Many of the countries they represented were still occupied. In the end, 54 of the 55 States invited attended the Chicago Conference, and by its conclusion on 7 December, 1944, 52 of them had signed the new *Convention on International Civil Aviation* which had been realized.

Known then and today more commonly as the 'Chicago Convention', this landmark agreement laid the foundation for the standards and procedures for peaceful global air navigation. It set out as its prime objective the development of international civil aviation "...in a safe and orderly manner", and such that air transport services would be established "on the basis of equality of opportunity and operated soundly and economically."

The Chicago Convention also formalized the expectation that a specialized International Civil Aviation Organization (ICAO) would be established, in order to organize and support the intensive international co-operation which the fledgling global air transport network would require.

Because of the usual delays expected in ratifying the Convention, the Chicago Conference presciently signed an Interim Agreement which foresaw the creation of a *Provisional* ICAO (PICAO) to serve as a temporary advisory and coordinating body.

On 4 April 1947, upon sufficient ratifications to the Chicago Convention, the provisional aspects of the PICAO were no longer relevant and it officially became known as ICAO. The first official ICAO Assembly was held in Montreal in May of that year.

International Civil Aviation Organization (ICAO), intergovernmental specialized agency associated with the United Nations (UN). Established in 1947 by the Convention on International Civil Aviation (1944), which had been signed by 52 states three years earlier

in Chicago, the ICAO is dedicated to developing safe and efficient international air transport for peaceful purposes and ensuring a reasonable opportunity for every state to operate international airlines. The organization's permanent headquarters are in Montreal.

The International Civil Aviation Organization (ICAO) creates regulations for aviation safety, security, efficiency and regularity and environmental protection. The organization also regulates operating practices and procedures covering the technical field of aviation.

Its core function is to maintain an administrative and expert bureaucracy (the ICAO Secretariat) supporting these diplomatic interactions, and to research new air transport policy and standardization innovations as directed and endorsed by governments through the ICAO Assembly, or by the ICAO Council which the assembly elects.

The Assembly, comprised of all Member States of ICAO, meets not less than once in three years and is convened by the Council at a suitable time and place. The Assembly has numerous powers and duties, among them to: elect the Member States to be represented on the Council; examine and take appropriate action on the reports of the Council and decide any matter reported to it by the Council; and approve the budgets of the Organization. In general, it reviews in detail the work of the Organization in the technical, administrative, economic, legal and technical cooperation fields. It has the power to approve amendments to the Convention on International Civil Aviation (Chicago, 1944), which are subject to ratification by Member States.

The Council is a permanent body of the Organization responsible to the Assembly. It is composed of 36 Member States elected by the Assembly for a three-year term. In the election, adequate representation is given to States of chief importance in air transport, States not otherwise included but which make the largest contribution to the provision of facilities for international civil air navigation and States not otherwise included whose designation will ensure that all major geographic areas of the world are represented on the Council. The Council has numerous functions, notable among which are to submit annual reports to the Assembly; carry out the directions of the Assembly; and discharge the duties and obligations which are laid on it by the *Convention on International Civil Aviation* (Chicago, 1944). It also administers the finances of ICAO; appoints and defines the duties of the Air Transport Committee, as well as the Committee on Joint Support of Air Navigation Services, the Finance Committee, the Committee on Unlawful Interference, the Technical Co-operation Committee and the Human Resources Committee. Another key function of the Council is to appoint the Secretary General.

ICAO's aims and objectives, as stated in the Chicago Convention, are to:

- foster the planning and development of international air transport so as to ensure the safe and orderly growth of international civil aviation throughout the world;
- encourage the arts of aircraft design and operation for peaceful purposes;
- encourage the development of airways, airports, and air navigation facilities for international civil aviation;
- meet the needs of the peoples of the world for safe, regular, efficient, and economical air transport;
- Prevent economic waste caused by unreasonable competition;
- ensure that the rights of contracting states are fully respected and that every contracting state has a fair opportunity to operate international airlines;

- avoid discrimination between contracting states;
- promote safety of flight in international air navigation;
- And promote generally the development of all aspects of international civil aeronautics.

Functions of ICAO

The International Civil Aviation Organization has two major functions as described below.

Define protocols for air accident investigation

The ICAO defines protocols that are used by signatory agencies of the Convention on International Civil Aviation in their respective countries during an investigation of air accidents.

Supervises standards and practices for international civil aviation

The ICAO supervises the standards and practices of air navigation and its infrastructure. They make sure flight inspection is conducted in accordance to set practices and ensure that standards are met. The International Civil Aviation Organization is also responsible for the prevention of unlawful interference, and facilitates border-crossing procedures for international civil aviation.

Role of ICAO in international civil aviation:

- The ICAO Council adopts standards and recommended practices concerning air navigation, its infrastructure, flight inspection, prevention of unlawful interference, and facilitation of border-crossing procedures for international civil aviation.
- ICAO defines the protocols for air accident investigation that are followed by transport safety authorities in countries signatory to the Chicago Convention on International Civil Aviation.
- ICAO standardizes certain functions for use in the airline industry, such as the Aeronautical Message Handling System (AMHS). This makes it a standards organization.
- ICAO is active in infrastructure management, including communication, navigation and surveillance / air traffic management (CNS/ATM) systems.
- ICAO has published standards for machine-readable passports and a more recent standard covers biometric passports.
- ICAO recommends a unification of units of measurement within aviation based on the International System of Units (SI).
- ICAO is responsible for creating drone regulations across the globe, and it is expected that it will only maintain the registry. This activity is seen as a forerunner to global regulations on flying drones under the auspices of the ICAO.
- ICAO provides a code system for airports, airlines, aircraft registration and aircraft type designator.
 1. Airport codes: ICAO uses 4-letter airport codes (vs. IATA's 3-letter codes). The ICAO code is based on the region and country of the airport. Example: VOIC-Cochin International Airport, VOBL- Kempegowda International Airport

2. Airline codes: ICAO also assigns 3-letter airline codes (versus the more-familiar 2-letter IATA codes—for example, *UAL* vs. *UA* for United Airlines, *AIC* vs *AI* for AirIndia).
3. Aircraft registrations: ICAO maintains the standards for aircraft registration ("tail numbers"), including the alphanumeric codes that identify the country of registration. For example, airplanes registered in the United States have tail numbers starting with *N*, and airplanes registered in Bahrain have tail numbers starting with *A9C*.
4. Aircraft type designator: ICAO is also responsible for issuing 2-4 character alphanumeric *aircraft type designators* for those aircraft types which are most commonly provided with air traffic service. These codes provide an abbreviated aircraft type identification, typically used in flight plans. For example, the Boeing 747-100, -200 and -300 are given the type designators *B741*, *B742* and *B743* respectively

IATA (International Air Transport Association):

IATA was founded in Havana, Cuba, on 19 April 1945. It is the prime vehicle for inter-airline cooperation in promoting safe, reliable, secure and economical air services - for the benefit of the world's consumers. The international scheduled air transport industry is more than 100 times larger than it was in 1945. Few industries can match the dynamism of that growth, which would have been much less spectacular without the standards, practices and procedures developed within IATA.

At its founding, IATA had 57 members from 31 nations, mostly in Europe and North America. Today it has some 290 members from 120 nations in every part of the globe.

As a non-governmental organization, it drew its legal existence from a special Act of the Canadian Parliament in December 1945. It closely resembles the International Civil Aviation Organization in terms of its activities and organizational structure.

The Chicago Convention did not result in a consensus on the economic regulation of the airline industry. According to Warren Koffler, IATA was formed to fill the resulting void and provide international air carriers with a mechanism to fix prices.

IATA is a voluntary, non-exclusive, non-political democratic organization and its membership is open to any operating airline which has been licensed to provide scheduled air services by the government.

IATA aims to be the force for value creation and innovation driving a safe, secure and profitable air transport industry that sustainably connects and enriches the world. IATA's mission is to represent, lead, and serve the airline industry

Objectives of IATA

- To ensure the safe, regular and economical air transport for the benefits of people worldwide.

- To provides a means of collaboration.
- To prevent economic waste caused by unreasonable competition.
- To encourage the art of aircrafts design and operation for peaceful purposes.
- To promote and develop international tourism.
- To provide a common platform for travel agencies and tour operators.
- To provide training and education facilities for members.
- To cooperate with the International Civil Aviation Organisation and other international and national organizations.

FUNCTIONS

- Regulates airlines 'rights' on operations in a foreign country (with host govt. consent).
- Regulates air tariffs.
- Settles disputes between any two airlines.
- Regulates complete accounting through their medium of BSP (Billing and Settlement Plan)
- Frames laws and by-laws on air transportation
- Keeping in view geographical conditions and location provides professional training to manpower -both distance learning as well as classroom studies
- Supports CRS providers (The aircraft return to service statement, often referred to as CRS (**certification for release to service**)).
- Designates each airline with a two alpha code, each location with a three alpha code and each airline with a three numeric code.
- Updates the travel industry with latest developments and changes on regular basis through their web sites/email/newsletters etc.
- Maintains high financial credibility.
- Maintains high standards of quality in service.
- Conducts meetings at regular intervals at all levels- international/regional/local and also invite participation from all members.

Questions:

1. Expand ICAO and IATA
2. Why was PICAQ established?
3. Write VMO of ICAO and IATA.
4. Explain the origin of ICAO and IATA.
5. Write a note on ICAO
6. Write a note on IATA
7. Write the objectives and functions of ICAO
8. Write the aims and Objectives of IATA
9. Describe is the role of ICAO in Civil Aviation/ Air Transportation?
10. Describe the role of IATA in Air Transportation.

PRINCIPLES OF AIRLINE AND AIRPORT MANAGEMENT

UNIT: 3 AIRPORT MANAGEMENT

Faculty Name: Akshatha S

An **airport** is an aerodrome with extended facilities, mostly for commercial air transport. Airports often have facilities to park and maintain aircraft, and a control tower.

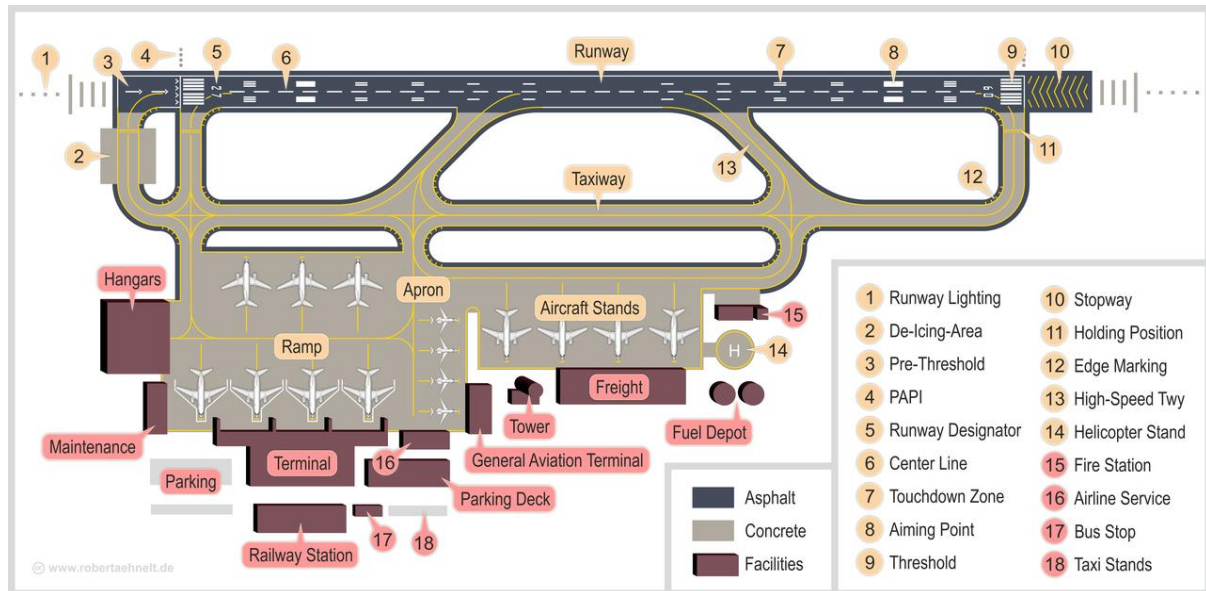


Fig: Sample infrastructure of a typical airport.

- **Landside:** On-airport access roads, parking structures/lots, car-rental facilities, public transportation etc.
- **Terminal:** All the passenger terminals that process passengers for departure and arrival.
- **Airfield:** All the areas where aircraft operate when on the ground, runways, taxiways, aprons etc.
- **Cargo facilities:** facilities to handle cargo operations.
- **General Aviation:** Private aircraft aprons, hangars and Fixed Base Operators (FBO, in essence a private air terminal).
- **Support facilities:** can include aircraft maintenance, fuel farms, ground service equipment, airport fire fighting, police and maintenance.
- **Airspace:** Everything above the buildings and ground.

AIRPORT PLANNING

Airport - Planning and Development: It involves planning, designing, and construction of terminals, runways, and other ancillary facilities for airlines to operate. Developing an airport requires huge amount of capital and anticipation of future growth of airlines and passengers. AAI is responsible for the development of airports in India.

TYPES OF AIRPORT PLANNING

- **Facilities Planning:** which focuses on future needs for airfield infrastructure such as runways, taxiways, aircraft parking facilities, associated lighting, communication and navigational systems, terminal buildings and facilities, parking lots, ground access infrastructure, and support facilities such as fuel farms, power plants, and non-aeronautical land uses such as office parks, hotels, restaurants, or rental car locations.
- **Financial Planning:** which is concerned with predicting future revenues and expenses,

budgeting resources, and planning for financial assistance through grant programs, bond issues or private investment.

- Economic Planning: which considers the future of economic activity, such as trade and commerce, and the activity of industries that exist on airport and off-airport property and are either a direct or indirect result of airport operations.
- Environmental Planning: which concentrates on maintaining or improving existing environmental conditions in the face of changes in future airport activity. Environmental planning includes land use planning, noise mitigation, wetland reclamation, and wildlife preservation.
- Organizational Planning: which entails the management of future labour requirements and organizational structures for the airport administration, staff, and associated labour force.
- Strategic Planning: which encompasses all other planning activities into a coordinated effort to maximize the future potential of the airport to the community.

Planning an Airport

To plan an airport, the AAI is concerned for three approvals –

- Technical Approvals
 - Review and approve Airport Layout Plan (ALP).
 - Review and acceptance of forecast.
 - Airspace and procedure changes.
 - Land acquisition.
- Financial Approvals
 - Funding for the airport is approved once the project gets clearance for safety, security, capacity, and airport access systems.
- Environmental Approvals
 - Review and assess environmental issues.
 - Find out solutions to address the environmental problems.

AIRPORT MASTER PLAN:

The FAA defines airport planning as a “systematic process” that creates guidelines for efficient airport development that meets local, state and national goals. The FAA states that a “key objective of airport planning” is using resources effectively in a way that meets the demand for aviation services “in a financially feasible manner.”

Airport Master Plan

For individual airports, the focus lies on creating an airport master plan, according to the FAA. The airport master plan provides a blueprint for the long-term development of an airport. The FAA reports that the major goals for an airport master plan include:

- Providing a graphic representation of existing airport features, future development and anticipated land use
- Establishing a realistic schedule for development
- Identifying a realistic development financial plan
- Validating the plan technically and procedurally through “investigation of concepts and alternatives on technical, economic and environmental grounds.”

- Preparing and presenting a plan to the public that addresses relevant issues and satisfies all regulations
- Establishing a framework for continuous planning

AIRPORT – TERMINAL PLANNING

Terminal area plans

The primary objective of the terminal area plans is to achieve an acceptable balance between passenger convenience, operating efficiency, facility investment. The physical and psychological comfort characteristics of the terminal area should afford the passenger orderly and convenient progress from automobile or public transportation through the terminal to the aircraft and back again.

Terminals are planned to minimize the walking distance by developing convenient auto parking facilities, convenient movements of passengers through the terminal complex, and conveyances that will permit fast and efficient handling of baggage. The planner normally establishes objectives for average walking distances from terminal points to parked aircraft. Conveyances for passengers such as moving walks and baggage handling systems are also considered.

The functional arrangement of the terminal area complex with the airside facilities is designed so as to be flexible enough to meet the operating characteristics of the airline industry for handling passengers and for fast ground servicing of aircraft so that minimum gate occupancy time and maximum airline operating economy will be achieved.

The final objective of the terminal area plans is to develop a complex that provides all necessary services within an optimum expenditure of funds from the standpoints of capital investment and maintenance and operating costs. This takes into account flexibility and costs that will be required in future expansions of the terminal area.

From a Terminal Planners' perspective an airport can be broadly divided into three main areas:

- **Airside:** Broadly considered to be the airfield where aircraft operate, runways, taxiways aprons and contiguous restricted areas including buildings.
- **Landside:** Comprises mostly the publicly accessible areas of the airport, consists mainly of transportation and parking.
- **Terminal:** it is the bridge between landside and airside, the terminal is split between pre- and post-security.

Terminals in general are divided into two main parts: the processor and the concourse(s). The processor is where the passenger enters and exits the terminal from/to the landside, it's where a passenger will check-in, go through security and customs as well as retrieve luggage. The concourse is where the passenger will find holdrooms to wait in until the flight is ready to board at the gate (also in the concourse). Functions such as concessions (food & beverage, duty free, etc...), lounges etc can be found in either the processor and/or the concourse depending on the design.

The following criteria need to be considered while planning and designing a terminal

- Passenger flow and traffic peaking.
- Minimum walking distance.
- Level of service for passengers and sophistication.

- Performance standards.
- Area for Retailers: Duty free shops, food joints.
- Area for Facility points such as Restrooms, ATM machines, and kiosks.
- Easy access to retail area and facility points.
- Compatibility of facilities with aircraft characteristics.
- Ability to handle changes in technology and automation.
- Expandability for future growth.
- Area and processing time for checking-in, immigration/customs clearance, baggage security screening, and baggage delivery.

Terminal Configurations

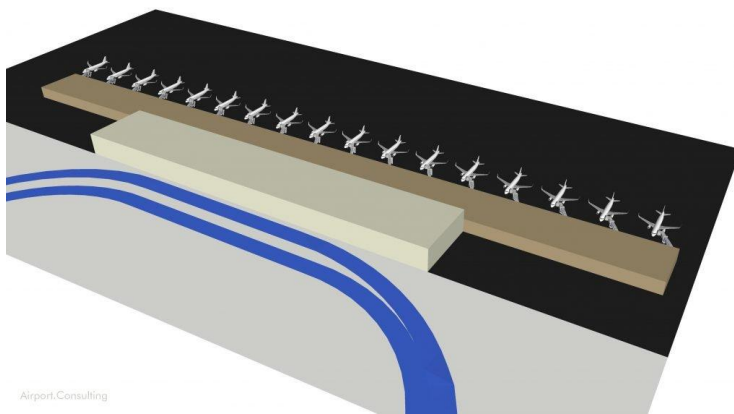


Fig: Linear configuration

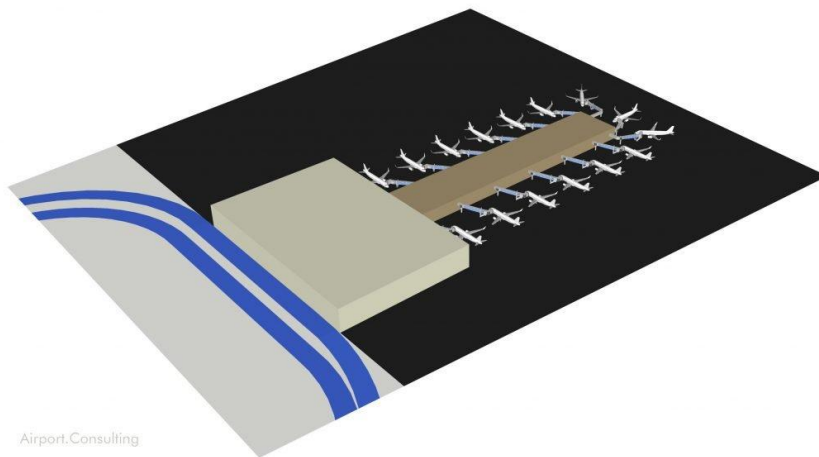


Fig: Pier configuration

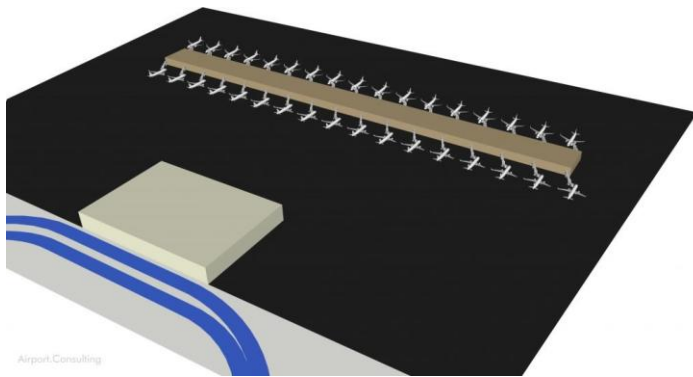


Fig: Satellite Configuration

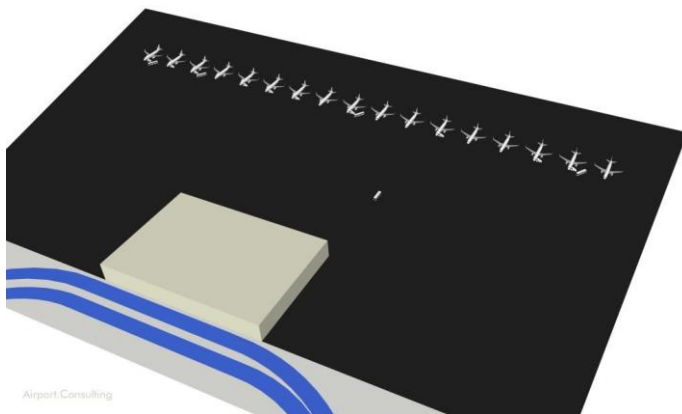


Fig: Remote configuration

FUNCTIONS OF AIRPORT:

Airport activities

1. Terminal activities: Parking, ground transportation, checking in, baggage-claiming, restoration, retailing and maintenance. Provide services to passengers and freight.
2. Airfield activities: Loading and unloading planes, maintenance and traffic control. Provide services to aircrafts.

Economic functions

1. Improved economic opportunities
2. Employment
3. Global service activities

AIRPORT OPERATIONS:

There are three types of surface that aircraft operate on:

- Runways, for takeoff and landing
 - Taxiways, where planes "taxi" (transfer to and from a runway)
 - Apron or ramp: a surface where planes are parked, loaded, unloaded or refuelled.
1. **Air traffic control:** (ATC) is the task of managing aircraft movements and making sure they are safe, orderly and expeditious. Air traffic control responsibilities at airports are usually divided into at least two main areas: *ground* and *tower*, though a single controller may work both stations.

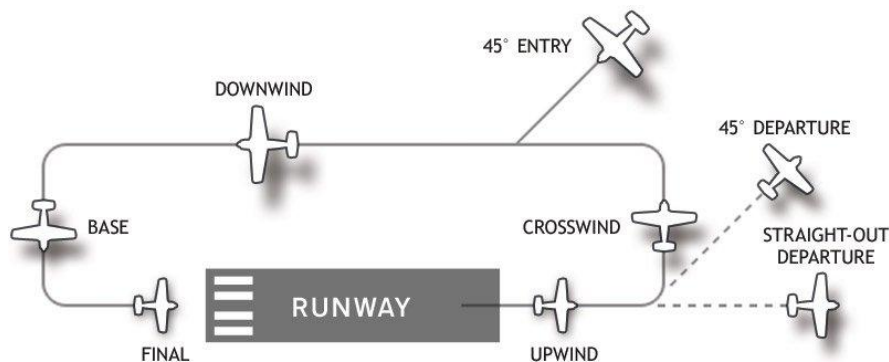
The busiest airports may subdivide responsibilities further, with *clearance delivery*, *apron control*, and/or other specialized ATC stations.

Ground control is responsible for directing all ground traffic in designated "movement areas", except the traffic on runways.

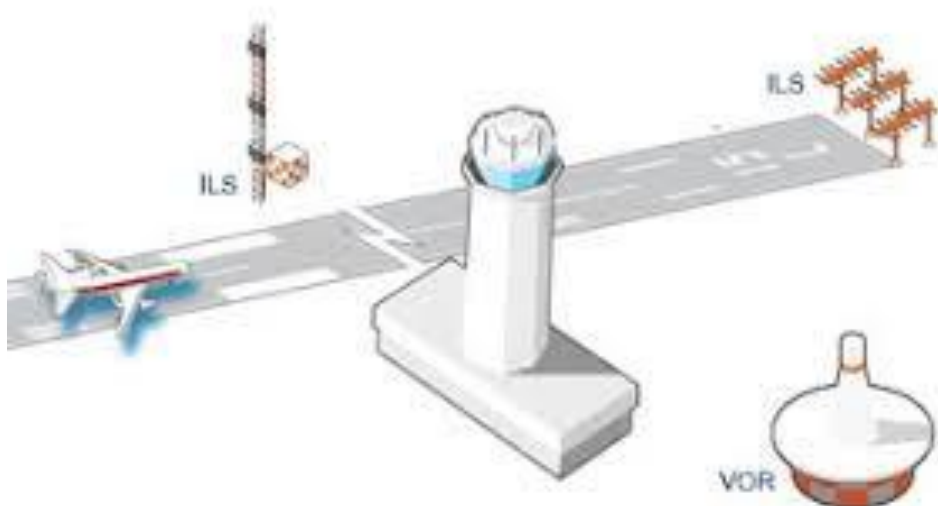
Tower control is responsible for aircraft on the runway and in the controlled airspace immediately surrounding the airport.



2. Traffic pattern: They may help to assure smooth traffic flow between departing and arriving aircraft.



3. Navigational aids: There are a number of aids, both visual and electronic, though not at all airports. A visual approach slope indicator (VASI) helps pilots fly the approach for landing. Some airports are equipped with a VHF omnidirectional range (VOR) to help pilots find the direction to the airport. VORs are often accompanied by a distance measuring equipment (DME) to determine the distance to the VOR. In poor weather, pilots will use an instrument landing system (ILS) to find the runway and fly the correct approach, even if they cannot see the ground.



4. Taxiway signs: Airport guidance signs provide direction and information to taxiing aircraft and airport vehicles.
5. Lighting: Many airports have lighting that help guide planes using the runways and taxiways at night or in rain or fog.



6. Weather observations: Weather observations at the airport are crucial to safe takeoffs and landings. In the US and Canada, the vast majority of airports, large and small, will either have some form of automated airport weather station



7. Airport ground crew (ground handling): Most airports have groundcrew handling the loading and unloading of passengers, crew, baggage and other services



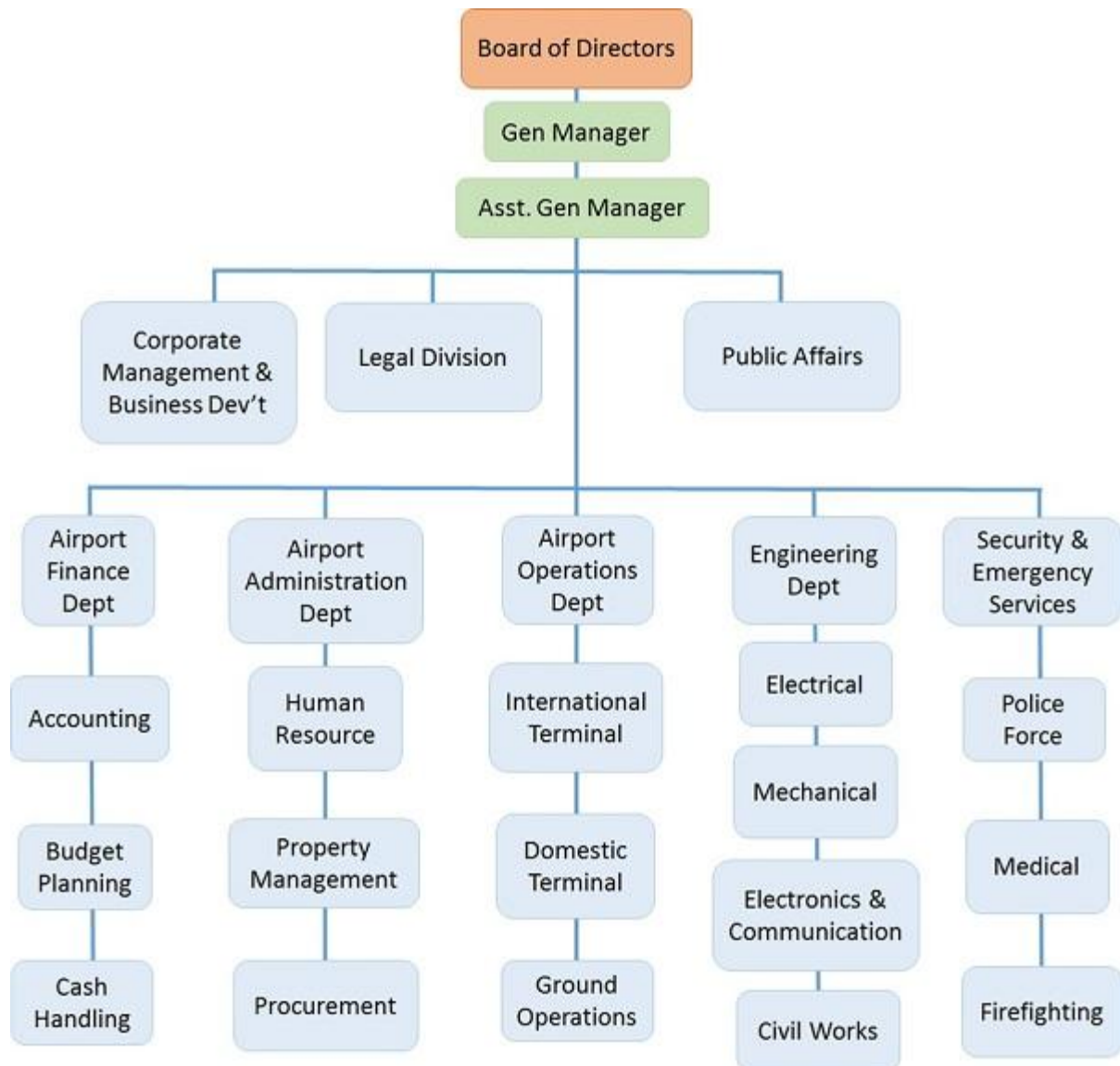
8. Maintenance management **or Airport Maintenance Operations** – they involve fixing or maintaining Airport infrastructure, facilities, and equipment. It involves renewing or repairing any part of the infrastructure, and repairing any automatic equipment used at the airport.
9. Safety management **or Airport Security Operations** – they are related to handling all security-related activities. Airport police and security staff work to avoid any mishap at the airport.
10. **Airport Public Relations** – these operations are about community affairs.

11. **Commercial Handling and Development Operations** – they are related to managing property licensing, leases, and other issues.

12. **Aircraft Rescue Operations** – they are aircraft/airport accidents related operations.

13. **Fire Fighting Operations** – they involve handling the accidents taken place due to fire.

AIRPORT ORGANIZATIONAL STRUCTURE



EXPLAIN THE ABOVE STRUCTURE WITH UR OWN WORDS

Airport Authorities:

An **airport authority** is an independent entity charged with the operation and oversight of an airport or group of airports. These authorities are often governed by a group of airport commissioners, who are appointed to lead the authority by a government official. When the authority of an entity encompasses more than just the airports in an area, harbor and rail facilities for example, the entity

may be referred to as a port authority. The Airports Council International is the world trade association of airport authorities.

Examples of airport authorities overseeing multiple airports

- Canada
 - Edmonton Airports
 - Edmonton International Airport
 - Edmonton/Villeneuve Airport
- Spain
 - AENA
 - Manages 46 airports and 2 heliports in Spain
- India
 - Airports Authority of India
 - Manages all airports in India, including:
 - 12 international airports
 - 89 domestic airports
 - 26 enclave airports

Global and Indian scenario of Airport management:

Global Airport management:

- ICAO
- ACI

Indian Airport Management:

- AAI

Airports Council International (ACI) is a global trade representative of the world's airport authorities. Established in 1991, ACI represents airports' interests with governments and international organizations, develops standards, policies and recommended practices for airports, and it provides information and training opportunities to raise the standards around the world. It aims at providing the public a safe, secure, efficient and an environmentally responsible air transport system.

It is governed by the ACI Governing Board. ACI World is located in Montreal, Quebec, Canada; it works on a daily basis with the International Civil Aviation Organization (ICAO) and is a member of the Air Transport Action Group (ATAG).

Priorities:

ACI represents airports interests with Governments and international organizations such as ICAO, develops standards, policies and recommended practices for airports, and provides information and training opportunities to raise standards around the world.

Safety

ACI considers safety as its main priority, and has launched programs such as Airport Excellence (APEX) to help airports enhance their level of safety. ACI also provides numerous publications on recommendations and best practices for airport operators. As part of its dedications to safe operations, ACI is involved in airport design specifications, standard operating procedures for airports, technology, systems & equipment, safety management systems for airports, safety guidance material and training.

Economics

ACI encourages its member airports to continuously improve operational and cost efficiency to moderate the cost of flying and to mitigate intensifying capacity shortfalls, but also to create sufficient rates of return enabling to invest in additional capacity.

Security

ACI has formulated a number of policy positions on security issues which guide the organisation and member airports.

IT

All of the ACI World IT initiatives are coordinated through the ACI World Airport IT Standing Committee. It is constituted by leaders from airports and business partners around the world and aims to reformulate recommended practices and develop guidelines, benchmarking and training materials to help airports find the best business solutions for themselves, their partners and their customers.

Environment

ACI develops initiatives to promote aviation and airport sustainable developments in order to limit or reduce environmental impacts while supporting economic and social benefits. ACI created tools to help airport calculate their own greenhouse gas emissions.

Facilitation

ACI helps airports improve their management or flow of passengers, baggage, cargo and mail by providing a set of best practices together with measuring and benchmarking opportunities provided through the Airport Service Quality (ASQ) programs.

DGCA:

Directorate General of Civil Aviation is an attached office of the Ministry of Civil Aviation. The Directorate General of Civil Aviation is the regulatory body in the field of Civil Aviation primarily dealing with safety issues. It is responsible for regulation of air transport services to/from/within India and for enforcement of civil air regulations, air safety and airworthiness standards. It also co-ordinates all regulatory functions with International Civil Aviation Organisation. The headquarters are located in New Delhi with regional offices in the various parts of India.

VISION: Endeavour to promote safe and efficient Air Transportation through regulation and proactivesafety oversight system.

DEPUTY MINISTER RESPONSIBLE: JYOTIRADITYA SCINDIA, MINISTER OF CIVIL AVIATION

FUNCTIONS OF DGCA

1. Registration of civil aircraft
2. Certification of airport
3. Licensing of pilots, aircraft maintenance engineers, air traffic controllers and flight engineers, and conducting examinations and checks for that purpose
4. Carrying out amendments to the Aircraft Act, the Aircraft Rules and the Civil Aviation Requirements for complying with the amendments to ICAO Annexes, and initiating proposals for amendment to any other Act or for passing a new Act in order to give effect to

an international Convention or amendment to an existing convention.

5. Formulation of standards of airworthiness for civil aircraft registered in India and grant of certificates of airworthiness to such aircraft
6. Conducting investigation into incidents and serious incidents involving aircraft up to 2250 kg AUW(all-up weight/ Gross weight) and taking accident prevention measures, including formulation of implementation of Safety Aviation Management Programmes
7. Checks on the proficiency of flight crew and other operational personnel such as flight dispatchers and cabin crew
8. Coordination of ICAO matters with all agencies, sending replies to State letters, and taking all necessary action arising out of the Universal Safety Oversight Audit Programme (USOAP) of ICAO.

AAI:

The Airports Authority of India or AAI is a statutory body, under the jurisdiction of Directorate General of Civil Aviation, Ministry of Civil Aviation, Government of India. It is responsible for creating, upgrading, maintaining and managing civil aviation infrastructure in India. It provides Communication Navigation Surveillance / Air Traffic Management (CNS/ATM) services over Indian airspace and adjoining oceanic areas. AAI is currently managing a total of 137 Airports, including 34 International Airports, 10 Customs Airports, 81 Domestic Airports and 23 Civil enclaves at Defense Airfields. AAI also has ground installations at all airports and 25 other locations to ensure safety of aircraft operations. AAI covers all major air-routes over Indian landmass via 29 Radar installations at 11 locations along with 700 VOR/DVOR installations co-located with Distance Measuring Equipment (DME). 52 runways are provided with Instrument landing system (ILS) installations with Night Landing Facilities at most of these airports and Automatic Message Switching System at 15 Airports.

The functions of AAI are as follows:

1. Design, Development, Operation and Maintenance of international and domestic airports and civil enclaves.
2. Control and Management of the Indian airspace extending beyond the territorial limits of the country, as accepted by ICAO.
3. Construction, Modification and Management of passenger terminals.
4. Development and Management of cargo terminals at international and domestic airports.
5. Provision of passenger facilities and information system at the passenger terminals at airports.
6. Expansion and strengthening of operation area, viz. Runways, Aprons, Taxiway etc.
7. Provision of visual aids.
8. Provision of Communication and Navigation aids, viz. ILS, DVOR, DME, Radar etc.

PRINCIPLES OF AIRLINE AND AIRPORT MANAGEMENT

UNIT: 4 AIRLINE OPERATIONS

Faculty : Akshatha S

Typical Structure of an Airline Industry Company

Typically, the airline would have a president or CEO reporting to a board of directors, with executives below her for the different divisions. A large airline with international flights and offices in multiple companies, for example, could have eight C-level executives reporting to the CEO, each with three to eight vice presidents below them, including:

Chief Human Resources Officer: personnel, human resources, training, administrative affairs

Chief Financial Officer: finance, accounting, purchasing

Chief Investment Officer: investment management, international relations, corporate innovation

Chief Development and IT Officer: customer solutions, IT strategy and governance, strategic projects

Chief Flight Operations Officer: flight operations, cabin crews, operations control, crew planning

Chief Commercial Officer: ground operations, regional flights, catering and inflight products

Chief Marketing Officer: corporate marketing, corporate communications, marketing, domestic sales, regional sales

Chief Cargo Officer: cargo maintenance, cargo sales, cargo operations

Flight Information Counter/Reservation and Ticketing

Reservation counter:

Reservation counter means a counter, where from a passenger can purchase his/her ticket for travel.

FUNCTIONS/RESPONSIBILITIES:

Reservation

Cancellation

Rescheduling/Rebooking

SSR(Special Service request) booking

Meal request

Changing sector

Help desk

Refund(depending on point of purchase)



Fig: Reservation counter



Travel Itinerary

Name: Naseer ali K

Email: nazamadullah@gmail.com

Booking date: 03 Aug 2015

Total paid: 8209.00 INR

Booking number
SDG39J



FLIGHT DETAILS



Flight 1: Tiruchirappalli → Kuala Lumpur			
AK 28 Low Fare	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> Tiruchirappalli (TRZ) Tiruchirappalli Civil Airport Wed 12 Aug 2015 2355 hrs (11:55PM) </td> <td style="width: 50%; padding: 5px;"> ✈ Kuala Lumpur (KUL) Kuala Lumpur International Airport 2 (klia2) Thu 13 Aug 2015 0625 hrs (6:25AM) </td> </tr> </table>	Tiruchirappalli (TRZ) Tiruchirappalli Civil Airport Wed 12 Aug 2015 2355 hrs (11:55PM)	✈ Kuala Lumpur (KUL) Kuala Lumpur International Airport 2 (klia2) Thu 13 Aug 2015 0625 hrs (6:25AM)
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All times shown are local

CHECK-IN STEP BY STEP



Check-in via web, kiosk, mobile or check in counter



Ensure checked baggage is within the pre booked weight



Bag Drop counter closes 1 hour before departure



Clear immigration and/or security as early as possible



Boarding gate closes 20mins before departure



Have a pleasant flight

Self check-in (Web, Kiosk, Mobile) closes 1 hour before departure for AirAsia and 4 hours for AirAsia X flights. For international departures, you may be required to verify your travel documents at either the document check counter or check-in counter to avoid being denied for the flight.

[Find out more](#)

Fig: E-ticket

Check In/Issue of Boarding Pass

CHECK –IN COUNTER

Airport check-in uses service counters found at commercial airports handling commercial air travel. The check-in is normally handled by an airline itself or a handling agent working on behalf of an airline. Passengers usually hand over any baggage that they do not wish or are not allowed to carry on to the aircraft's cabin and receive a boarding pass before they can proceed to board their aircraft. Check-in is usually the first procedure for a passenger when arriving at an airport, as airline

regulations require passengers to check in by certain times prior to the departure of a flight. This duration spans from 15 minutes to 4 hours depending on the destination and airline. During this process, the passenger has the ability to ask for special accommodations such as seating preferences, inquire about flight or destination information, make changes to reservations, accumulate frequent flyer program miles, or pay for upgrades. The airline check-in's main function, however, is to accept luggage that is to go in the aircraft's cargo hold and issue boarding passes.

FUNCTIONS OF CHECK –IN COUNTER: When passenger presents himself/herself at the check-in counter the following checks must be done

- Check for the security sticker and condition of the baggage. Make sure baggage has been screened and does not contain any dangerous goods articles.
- Request for ticket if not already presented. Check ticket details like validity of ticket, sector of travel etc
- Check photo ID card of the passenger without any mistake.
- Ask for seat preference
- Provide assistance according to passenger status (be more active for SSR passengers).
- Weigh baggage and ask about the fragile item.
- Charge for excess baggage (only when passenger baggage weight is more than FBA (Free Baggage Allowance)).
- Issue Boarding Pass and Baggage Tag.
- Confirm passenger about sector, seat number and baggage.
- Inform passenger about flight status, gate numbers.



Fig: Check-in Counter



Fig: Boarding Pass



Fig: Baggage Tag

CUSTOMS AND IMMIGRATION FORMALITIES

Crossing international borders usually involves some kind of checkpoint—and since international airports are the first point of entry to a new country, they have checkpoints in them through which travelers must pass before they leave the airport. Collectively, these are typically referred to as customs and immigration.

Officials at customs and immigration are checking travelers for things like whether they have the right documents to be in the country, whether they're legally allowed to be there, and whether they're bringing anything illegal with them.

“Immigration” is about the people traveling from one country to another. It’s sometimes called “passport control” or “border control” depending on the airport. “Customs” is about the stuff those people are carrying with them.

In many airports, immigration is a mandatory process that involves speaking with an immigration officer who stamps your passport, while customs is an optional process.

Security Check

- Present yourself for the security check. You’ll be frisked as part of the procedure. Keep your ID along with your boarding pass throughout the process.
- Place your carry-on baggage along with metallic objects and electronic items in the tray assigned for electronic screening
- In case of having a metallic unit in your body (for medical purposes ex: pacemaker, artificial joint) keep a doctor’s certificate in hand for the same.
- Go to the end of baggage screening; claim your possessions and effects. If it’s a domestic flight, proceed into the “airside” terminal. In case of an international flight, proceed towards Immigration and Customs controls.

Baggage handling:

Baggage handling is the process of transporting passenger luggage from a check-in counter at a departure airport, onto a plane cargo hold and then to a collection point at an arrival airport.

A baggage handling system (BHS) is made up of a number of different processes and checks. A BHS is designed to count bags, check weights of bags, balance loads, screen suitcases for security reasons, transport bags through an airport conveyor belt system and read bag information automatically.

HAND BAGGAGE SCREENING

Checked baggage is transported in the hold; it must be checked in at the airport and collected on arrival at your destination from baggage reclaim.

Hand baggage is usually carried in the cabin by the passenger and must be stowed in the overhead lockers or underneath the seat in front of the passenger.

The screening of hand baggage is a challenging process requiring a high commitment of manpower and resources to detect threats that may be well concealed among the millions of bags that are carried through airports daily.

Hand baggage screening X-ray machines are typically conveyor units usually consist of three main parts:

1. **Main Body:** This houses the X-ray tube; tunnel with overlapping lead impregnated curtains at the input and output ends of the tunnel; and perspex screens.

2. **Conveyor:** This moves the items through the X-ray tunnel and produces them for collection or searching.
3. **Control Console:** This features the keyboard for operating the machine and using the image enhancement features; and a television monitor – sometimes two monitors – for analysing the X-ray images. The images can usually be electronically retained and manipulated after the item has passed through the X-ray beam. Once an image has appeared on the screen, the image will remain on the screen until it is replaced by the image of the next bag, even when the bag is gone.

HANDLING OF STRETCHER PASSENGERS

The airline will make every possible effort to assist passengers with disabilities, however, when accepting them for carriage, the following conditions must be met:

- the passenger does not have a dangerous / contagious disease;
- the passenger's appearance and mental state do not pose a threat to others.

Medicines, medical equipment (ventilators, oxygen cylinders, components for them), a folding wheelchair carried in the cabin, crutches of patients / disabled people are transported *free of charge and are not included in the free baggage allowance*.

Passengers with reduced mobility in wheelchairs

Passengers with reduced mobility in a wheelchair are accepted for carriage with or without an accompanying person under the supervision of the Airline.

The wheelchair is carried in the luggage compartment.

A **power-driven** wheelchair can be used by passengers before boarding the aircraft or checked in at check-in.

Passengers using an **electrically powered** wheelchair must check in the wheelchair in their baggage at check-in. The transportation of an electrically powered wheelchair is carried out in accordance with safety rules: *the battery must be disconnected, the battery terminals must be isolated to prevent short circuits*. The battery capacity of the wheelchair lithium ion battery must not exceed 300 Wh. Passenger carry only 1 spare battery with a maximum capacity of 300 Wh or 2 spare batteries with a maximum capacity of 160 Wh each in their baggage.

After checking in the wheelchair, the passenger will be transported to the plane in a wheelchair provided by the airport. The wheelchair is returned to the passenger immediately after leaving the aircraft, or in the baggage claim area (in this case, the passenger with reduced mobility will be taken to the baggage claim point in a wheelchair provided by the airport).

Severely ill passenger / Sick on a stretcher

Carriage of a passenger on a stretcher can be performed only after receiving confirmation of the possibility of its implementation by the Airline no later than four days before the planned carriage.

The Airline has the right to refuse carriage in the absence of the technical capability of the aircraft equipment, or other reasons at the discretion of the Airline.

To order the service, passenger must fill out a request in the form (MEDIF) and send it to the email address: company@u6.ru not later than 7 working days before the start of the planned transportation.

Carriage of a passenger on a stretcher is possible only when departing on direct regular flights of the Airline accompanied by at least one adult.

The minimum permissible height of a passenger for transportation on a stretcher is 140 cm.

The airline does not provide medical escort and additional equipment required to transport a passenger on a stretcher.

Transportation is carried out in the last 3 rows of the Economy cabin on the port side. A passenger on a stretcher at the airport is serviced by the airport's medical service.

The cost of the service is agreed individually and is at least 9 seats at the full economy class fare.

HANDLING OF HUMAN REMAINS

There are currently no universally agreed international regulations restricting transport of human remains to cargo aircraft only. Aircraft operators typically allow transport of human remains as cargo on aircraft, either on cargo-aircraft or in the cargo section of a passenger aircraft. Cremated remains may be shipped as cargo or may be carried by passengers as part of their baggage. Aircraft operators that are members of the International Air Transport Association (IATA) generally follow the IATA requirements and recommendations (the Air Cargo Tariff and Rules, TACT 2.3.3 and the Airport Handling Manual, AHM 333) on the transport of human remains. A summary of import restrictions on human remains enforced by different States is available in Appendix 3 and the publications can be purchased from IATA online (TACT www.iata.org/tact and AHM www.iata.org/ahm). The following are recommended to all stakeholders considering transport of COVID-19 human remains by air:

Requirements for cremated remains

- Cremated human remains (cremains) are usually accepted in any aircraft without advance arrangements, but some States require that cremains be declared prior to travel.
- The ashes should be placed in a polyurethane bag and then enclosed in a funeral urn.

The urn:

- can be transported in either carry-on baggage or checked baggage. Policies might vary and it is recommended to confirm with the States and aircraft operators concerned;
- must be efficiently protected against breakage by cushioning packaging; and
- will be subject to X-ray screening as part of the normal security procedure. The security measures applied to powder-like substances will have to be checked ahead of the travel for the State of origin and the potential subsequent connections.

HANDLING OF VIP/VVIP:

VIPs are provided with reserved lounge facilities. AAI gives the list of passenger dignitaries who are entitled to take their vehicle up to aircraft and the dignitaries exempted from this service.

Action taken by airports for handling VVIP/VIP:

1. **Documentation:** After receiving message with respect to VVIPs/VIPs movement airport terminal manager examines the message/tour programme/itinerary of VVIPs/VIPs and informs airport director/director in charge in this regard. Director in charge enter the same in VIP register, he ensure that specific lounge reserved be mentioned.

2. **Daily VIP Pro Forma:** This VIP pro forma enlist all VVIP/VIP movements 24 hours cycle. Copy of this pro forma is forwarded to all concerned by airport terminal manager.

3. **VVIP/VIP Team Briefing:** Sr. Airport Terminal Manager/Airport Terminal Manager on shift duties shall inform all concerned in advance of the particular VIP movements

(a) Sr. Airport Terminal Manager/Airport Terminal Manager should tie all VVIP/VIP movements with Airport Director/Airport-in-Charge or with an officer authorized by Airport Director or Airport-in-Charge in this behalf.

(b) Sr. Manager Engg. (E)/(C) and Sr. Manager (Electronics) are well informed for VIP movement to ensure that all requirements associated to their departments are kept in proper operational status and desired shape. For the smooth handling of the movement authorised officer should keep close liaison with office/residence of representatives of VVIP/VIP.

4. **Responsibility of Airport Director/Airport in-Charge:** The concerned Airport Director/Airport-in-Charge takes overall responsibility for smooth and efficient handling besides coordinating with all agencies/departments.

5. **VVIP/VIP follow up report:** Sr. Airport Terminal Manager submit VVIP handling follow up report.

HANDLING OF CIP:

Many of the charters operated by Titan Airways will involve carriage of people who are widely known in public life. Such passengers should be treated so as to ensure their privacy is not invaded. Handling staff must not approach such CIP passengers for photographs/autographs etc.

CIP/VIP Lounges: From time to time small groups of passengers or entire loads will require use of separate lounge prior to departure. Generally such operations will be carried out through Business aviation/VIP/FBO type terminals where available. These arrangements will be advised in advance by Titan Airways.

GROUND HANDLING – CIP/VIP/VVIP FLIGHTS

- Full Ground Handling Services
- Customs & Immigration
- Weather Packages
- Free Hotel reservations arrangements
- Free Transportation arrangements
- VIP Catering
- Fuel (JET A1)
- Passenger & Aircraft Security for qualifying flight
- Tailored FBO(fixed-base operator) Services
- Airside VIP Lounge / Coffee Bar / Complimentary refreshments
- Fully Wi-Fi configured FBO
- Shower facilities
- Direct ramp transfers

