FUNDAMENTALS OF AIRPORT MANAGEMENT

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HISTORICAL EVOLUTION OF AIR TRANSPORTATION SYSTEM

- FIRST FLIGHT AT KITTY HAWK IN 1903 BY WRIGHT BROTHERS
- COMMERCIAL PASSENGER SERVICE JAN 1914 – TAMPA TO ST PETERSBURG, FLORIDA
- WW – I
- FIRST COMMERCIAL INTERNATIONAL AIR TRANSPORT BETWEEN ENGLAND AND FRANCE IN 1919
- PARIS CONVENTION 1919 AIRSPACE CONTROLLED BY OWN COUNTRY
- EUROPE GOVT PROMOTED AIRLINES
- US AIRMAIL
- AFTER WW – II INCREASED ACTIVITY, BUT STILL AFFORDABLE BY ELITE
- BY 1958 FURTHER INCREASE IN PASSENGERS CROSSINGATLANTIC
- OCT 1958 JET ENGINES ON COMMERCIAL - SPEED DOUBLED, PRODUCTIVITY INCREASED
- PAASENGERS, CARGO - MEDICAL & PERISHABLE
- LCC IN DEVELOPING COUNTRIES
- 2010 2.4 BILLION PASSENGERS, 2019 4.54, PRE-COVID 2020 4.73??
- AIR CARGO – PERISHIBLE, SENSITIVE
- EARLIER STATE OWNED AIRLINES, THEN PARTIAL PRIVATISATION, WITH DEREGULATION EMERGENCE OF HUB AND SPOKE SYSTEM
- LCC'S
- OPEN SKIES POLICY

HISTORICAL EVOLUTION OF AIR TRANSPORTATION SYSTEM

- REGIONAL CONNECTIVITY SCHEME (RCS)

The Present

- ALTHOUGH THE PAST CENTURY WITNESSED THE DRAMATIC GROWTH OF AIR TRANSPORTATION, IMPORTANT CHALLENGES CLOUD ITS FUTURE
- FINANCIAL VIABILITY
  - AIRCRAFT SIZE, EFFCIENCY, SEATING, IFE ETC
- FUEL EFFICIENCY AND COSTS
  - IN 2006, FUEL ACCOUNTED FOR ABOUT 30% OF THE OPERATING COSTS OF US AIRLINES, UP SHARPLY FROM A FEW YEARS EARLIER.
  - THERE IS NO EASY SUBSTITUTE FOR FOSSIL FUELS
  - FUEL EFFICIENCY OF AIR TRANSPORT HAS SUBSTANTIALLY IMPROVED IN RECENT DECADES, AS HIGH AS 70% , IMPROVEMENTS AT A RATE OF 1 TO 2% PER YEAR.
- TERRORISM AND SECURITY.
  - WW I DAYS OF "FLYING COFFINS".
  - SEPTEMBER 11 ATTACKS CAUSED A TWO-YEAR DIP IN TRAFFIC LEVELS
- AIRPORTS ARE FACING CAPACITY PRESSURES AND CONGESTION
  - EVOLUTION OF MODERN TECHNOLOGIES LIKE ARTIFICIAL INTELLIGENCE AND DRONE TECHNOLOGIES ARE IMPACTING THE AIR TRANSPORTATION SYSTEMS IN A BIG WAY

HISTORICAL EVOLUTION OF AIRPORTS

- FROM GRASSY STRIP, APPROACH AT ANY ANGLE THAT PROVIDED A FAVORABLE WIND DIRECTION.TO DIRT-ONLY FIELD, ONLY FUNCTIONED IN DRY CONDITIONS. LATER, CONCRETE SURFACES ALLOW LANDINGS, RAIN OR SHINE, DAY OR NIGHT.
- "WORLD'S OLDEST AIRPORT" IS DISPUTED, BUT COLLEGE PARK AIRPORT IN MARYLAND, US, ESTABLISHED IN 1909 BY WILBUR WRIGHT, GENERALLY AGREED TO BE THE WORLD'S OLDEST CONTINUALLY OPERATING AIRFIELD, SERVES ONLY GENERAL AVIATION
- BISBEE-DOUGLAS INTERNATIONAL AIRPORT IN ARIZONA DECLARED "THE FIRST INTERNATIONAL AIRPORT OF THE AMERICAS" BY US PRESIDENT FRANKLIN D. ROOSEVELT IN 1943
- PEARSON FIELD AIRPORT IN VANCOUVER, WASHINGTON HAD A DIRIGIBLE LAND IN 1905 AND PLANES IN 1911 AND IS STILL IN USE.
- BREMEN AIRPORT OPENED IN 1913 REMAINS IN USE, ALTHOUGH IT SERVED AS AN AMERICAN MILITARY FIELD BETWEEN 1945 AND 1949
- AMSTERDAM AIRPORT SCHIPHOL OPENED ON SEP 16, 1916 AS A MILITARY AIRFIELD, BUT ONLY ACCEPTED CIVIL AIRCRAFT FROM DECEMBER 17, 1920
- SYDNEY AIRPORT STARTED OPERATIONS IN JAN 1920 CLAIM TO BE ONE OF THE WORLD'S OLDEST CONTINUALLY OPERATING COMMERCIAL AIRPORTS
- MINNEAPOLIS-SAINT PAUL INTERNATIONAL AIRPORT IN MINNEAPOLIS-SAINT PAUL, MINNESOTA, OPENED IN 1920 AND HAS BEEN IN CONTINUOUS COMMERCIAL SERVICE SINCE. IT SERVES ABOUT 35,000,000 PASSENGERS EACH YEAR AND CONTINUES TO EXPAND, LATER OPENING A NEW 11,000 FOOT (3,355 METER) RUNWAY. OF THE AIRPORTS CONSTRUCTED DURING THIS EARLY PERIOD IN AVIATION, IT IS ONE OF THE LARGEST AND BUSIEST THAT IS STILL CURRENTLY OPERATING
- ROME CIAMPINO AIRPORT, OPENED IN 1916, IS ALSO A CONTENDER. INCREASED AIRCRAFT TRAFFIC DURING WORLD WAR I LED TO THE CONSTRUCTION OF LANDING GROUNDS. AIRCRAFT HAD TO APPROACH THESE FROM CERTAIN DIRECTIONS AND THIS LED TO THE DEVELOPMENT OF AIDS FOR DIRECTING THE APPROACH AND LANDING SLOPE

HISTORICAL EVOLUTION OF AIRPORTS

- FOLLOWING THE WAR, SOME OF THESE MILITARY AIRFIELDS ADDED CIVIL FACILITIES FOR HANDLING PASSENGER TRAFFIC. ONE OF THE EARLIEST SUCH FIELDS WAS PARIS – LE BOURGET AIRPORT
- FIRST AIRPORT TO OPERATE SCHEDULED INTERNATIONAL COMMERCIAL SERVICES WAS HOUNSLOW HEATH AERODROME IN AUG 1919, BUT WAS CLOSED AND SUPPLANTED BY CROYDON AIRPORT IN MARCH 1920
- IN 1922, FIRST PERMANENT AIRPORT AND COMMERCIAL TERMINAL SOLELY FOR COMMERCIAL AVIATION OPENED AT FLUGHAFEN DEVAU NEAR WHAT WAS THEN KÖNIGSBERG, EAST PRUSSIA
- AIRPORTS OF THIS ERA USED PAVED "SURFACES", WHICH PERMITTED NIGHT FLYING AS WELL AS LANDING HEAVIER AIRCRAFT
- THE FIRST LIGHTING USED ON AN AIRPORT WAS DURING LATTER PART OF THE 1920s; IN 1930s APPROACH LIGHTING CAME INTO USE. INDICATED THE PROPER DIRECTION AND ANGLE OF DESCENT. COLOURS AND FLASH INTERVALS BECAME STANDARDIZED UNDER THE INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO). 1940s, THE SLOPE-LINE APPROACH SYSTEM WAS INTRODUCED. THIS CONSISTED OF TWO ROWS OF LIGHTS THAT FORMED A FUNNEL INDICATING AN AIRCRAFT'S POSITION ON THE GLIDESLOPE. ADDITIONAL LIGHTS INDICATED INCORRECT ALTITUDE AND DIRECTION.
- AFTER WORLD WAR II, AIRPORT DESIGN BECAME MORE SOPHISTICATED. PASSENGER BUILDINGS WERE GROUPED TOGETHER IN AN ISLAND, WITH RUNWAYS ARRANGED IN GROUPS ABOUT THE TERMINAL. THIS ARRANGEMENT PERMITTED EXPANSION OF THE FACILITIES. BUT IT ALSO MEANT THAT PASSENGERS HAD TO TRAVEL FURTHER TO REACH THEIR PLANE.
- AIRPORT CONSTRUCTION BOOMED DURING THE 1960s WITH THE INCREASE IN JET AIRCRAFT TRAFFIC. RUNWAYS WERE EXTENDED OUT TO 3,000 M (9,800 FT), FIELDS CONSTRUCTED OUT OF REINFORCED CONCRETE USING A SLIP-FORM MACHINE THAT PRODUCES A CONTINUAL SLAB WITH NO DISRUPTIONS ALONG THE LENGTH. EARLY 1960s SAW THE INTRODUCTION OF JET BRIDGE SYSTEMS TO MODERN AIRPORT TERMINALS, AN INNOVATION WHICH ELIMINATED OUTDOOR PASSENGER BOARDING. THESE SYSTEMS BECAME COMMONPLACE IN THE UNITED STATES BY THE 1970S.

INTRODUCTION TO AIRPORT MANAGEMENT

- **CONCEPT AND NEED**

"Modern airports are the focal point of many skills and crafts in a common endeavor"

- **ORIGINALLY STRATEGIC FOR A COUNTRY**
- **GROWTH LED TO AIRPORT MANAGEMENT**
- **AIRPORT AN ORGANISATION OR BUSINESS**
  - RAPID CHANGING AIRPORT ENVIRONMENT
  - PRIVATISATION
  - FOCUS ON CUSTOMER, INNOVATION, TECHNOLOGY, MANAGEMENT AUTONOMY
  - FEEL GOOD FOR ALL USERS
  - COMPLEX ECO-SYSTEM – LANDSIDE, AIRSIDE, TERMINAL

AIR TRANSPORTATION – A HISTORICAL PERSPECTIVE

- ON 17 DECEMBER 1903, IN NORTH CAROLINA, A FRAIL STRUCTURE OF METAL, WOOD AND FABRIC STRUGGLED INTO THE AIR AND CARRIED A SINGLE PASSENGER 260 METERS,
- IN LESS THAN SIX YEARS, THE FIRST AIRLINE-GERMANY'S DEUTSEHE LUFTSCHIFFAHRTS WAS ESTABLISHED IN NOVEMBER, 1909.
- BY THE OUT BREAK OF WAR IN 1914, IT HAD FLOWN OVER 33,000 INTREPID PASSENGERS IN 1500 ZEPPELIN AIRSHIP FLIGHTS.
- FOLLOWING WORLD WAR 1, REGULAR AIR TRANSPORTATION BEGAN IN JANUARY 1919, USING MAKE-SHIFT LANDING STRIPS AND WITHIN 12 MONTHS AIR SERVICES WERE ESTABLISHED IN SEVERAL COUNTRIES.
- BRITISH OPERATOR, AIR TRANSPORT AND TRAVEL (AT&T) BECAME THE FIRST INTERNATIONAL SCHEDULED AIRLINE OPERATING THE LONDON-PARIS SERVICE USING A DH 16, CARRYING FOUR PASSENGERS
- BY END OF 1919, FIVE CARRIERS-AT&T, DENMARK'S DANSKE LUFTARTELSKAB, NORSKE LUFTARTEDERI (NORWAY), DEUTSCHE LUFTREEDEREI (GERMANY) AND SVENSKA LUFTRAFIK (SWEEDEN) FORMED THE INTERNATIONAL AIR TRAFFIC ASSOCIATION (IATA) AND A SIXTH CARRIER-THE ONLY ONE WHICH SURVIVES TODAY JOINED FROM HOLLAND- KONINKLIJKE LUCHTVAART MAATSCHAPPIJ (KLM) ROYAL DUTCH AIRLINES.

AIR TRANSPORTATION – A HISTORICAL PERSPECTIVE

- SIMULTANEOUSLY,CIVIL AVIATION BECAME SUBJECT TO WORLD POLITICS AND IN 1919, AIR TRANSPORT OPERATIONS WERE COVERED UNDER THE INTERNATIONAL COMMISSION FOR AIR NAVIGATION (ICAN).
- EARLY AIR TRANSPORT FOLLOWED COLONIAL LINES, AND BY 1924, THE UK GOVERNMENT SET UP IMPERIAL AIRWAYS AND IT'S SERVICE TO INDIA AND AUSTRALIA COMMENCED IN 1929.
- THE TRANS-ATLANTIC CROSSING TOOK PLACE IN 1927 BY TRANS CONTINENTAL AIR TRANSPORT , A FORE RUNNER OF TRANS WORLD AIRWAYS (TWA).
- AMERICAN AIRWAYS WAS FORMED IN 1930 TO FLY MAIL AND LATER BECAME AMERICAN AIRLINES. THIS LED TO THE BIRTH OF FOUR SIGNIFICANT US CARRIERS; TWA, AMERICAN,UNITED AND EASTERN.(US AVIATION CATALOGUE, 1970).
- AROUND 1930, CIVIL AIR TRANSPORT OPERATIONS BEGAN IN SOUTH AFRICA, AND THE UNION AIRWAYS AND SOUTH-WEST AFRICA AIRWAYS WERE ACQUIRED BY SOUTH AFRICAN AIRWAYS.IN 1931, THE FIRST UK-AFRICA SERVICES WERE OPERATED TO KHARTOUM AND NAIROBI AND LATER ON TO CAPE TOWN. BY THE LATE 1940S, THOUSANDS OF WAR SURPLUS C-47/DAKOTA AIRCRAFT SUPPORTED INNUMERABLE AIRLINES AROUND THE WORLD. IT BOOSTED THE CIVIL AIR TRANSPORTATION GROWTH AS THEY WERE CHEAPER AND READILY AVAILABLE WITH MINIMUM MAINTENANCE EFFORT.
- CIVIL AVIATION IN INDIA STARTED AS EARLY AS ON 18TH FEB 1911 WHEN THE FIRST COMMERCIAL FLIGHT TOOK OFF FROM ALLAHABAD FOR NAINI AND FLEW OVER A DISTANCE OF 6 MILES CARRYING 6,500 PIECES OF MAIL THUS CREATING THE WORLD'S FIRST AIR MAIL SERVICE.
- J.R.D. TATA FLEW FROM KARACHI TO JUHU (MUMBAI) CARRYING MAIL THUS STARTING THE TATA AIRLINES IN 1932.

AIR TRANSPORTATION – WHY SPECIAL

TO PROVIDE EFFICIENT SERVICES, AIR TRANSPORT INDUSTRY MUST COMBINE THE EFFORT OF:

- PEOPLE WHO SELL THE SERVICE, FOR INSTANCE TRAVEL AGENTS
- PEOPLE WHO OPERATE AIRCRAFTS, AIRLINES
- PEOPLE WHO OPERATE AIRPORTS - ANSPs
- AIR TRAFFIC CONTROLLERS
- CUSTOMS
- SECURITY AGENCIES
- MORE IMPORTANTLY PASSENGERS
- CONCESSIONARIES

CHALLENGES

- STEADILY INCREASING DEMAND
- PASSENGER GROWTH
- FREIGHT GROWTH
- GROWTH DRIVEN BY
  - RISING GDP, DISPOSABLE INCOME, AND LIVING STANDARDS
  - REDUCED AIR TRAVEL COSTS
  - GLOBALIZATION
  - DEREGULATION AND OPEN AIR POLICY

COMPACTING STRATEGIES

- TRENDS AND DEVELOPMENTS IN AIRPORT DESIGN
- FINANCIAL PLANNING
  - COST EFFECTIVE
  - FLEXIBLE
  - SECURITY AND SCREENING
  - SHA
  - CONCESSIONARIES
  - SPECIAL FACILITES – AIRSIDE AND LANDSIDE
  - IMPORTANT TERMINOLOGIES

AIRPORT GOVERNANCE

- OWNERSHIP AND CONTROL DECIDED AT NATIONAL LEVEL BASED ON FOLLOWING FACTORS
- THE LEGAL, INSTITUTIONAL AND GOVERNANCE FRAMEWORKS OF THE GOVERNMENT AND SYSTEM OF ADMINISTRATION IN THE STATE
- THE COST AND SOURCE OF FUNDS REQUIRED TO MEET INFRASTRUCTURE NEEDS AND TO SECURE THE CONTINUITY OF OPERATION TAKING INTO ACCOUNT TRAFFIC FORECASTS AND RISKS (FOR EXAMPLE, CONTINGENCY PLANNING TO DEAL WITH THE POTENTIAL IMPACT OF REDUCTIONS IN REVENUE THAT COULD OCCUR DUE TO DECREASES IN AIR TRAFFIC)
- MARKET CONDITIONS INCLUDING DEGREES OF COMPETITION AMONG AIRPORTS AND USERS
- THE REQUIREMENTS OF THE AVIATION INDUSTRY
- THE CONTRIBUTION OF CIVIL AVIATION TO THE STATE'S ECONOMIC AND SOCIAL OBJECTIVES AND THE EXTENT TO WHICH CIVIL AVIATION HAS BEEN DEVELOPED TO MEET THOSE NEEDS

AIRPORT GOVERNANCE

- THE PROCESS OF TRANSITION FROM ONE FORMAT TO ANOTHER WILL ALSO DEPEND ON THE CIRCUMSTANCES AND PRACTICES OF EACH STATE BUT, IN GENERAL, THE TRANSITIONAL ISSUES THAT MAY ARISE INCLUDE:
- IDENTIFICATION, VALUATION AND TRANSFER OF ASSETS;
- DETERMINATION OF THE INITIAL FINANCIAL STRUCTURE, STAFFING AND CONDITIONS OF EMPLOYMENT INCLUDING PENSION ARRANGEMENTS AND MAINTENANCE OF GOOD LABOUR RELATIONS DURING THE TRANSITION PERIOD;
- ESTABLISHMENT OF GOOD CORPORATE GOVERNANCE;
- ESTABLISHMENT OF FORMAL RELATIONSHIPS BETWEEN THE AIRPORT(S) AND THE GOVERNMENT, INCLUDING THE MILITARY;
- ESTABLISHMENT OF FORMAL RELATIONSHIPS BETWEEN THE AIRPORT(S) AND THE AVIATION SAFETY AND SECURITY ORGANIZATION(S);
- ESTABLISHMENT OF AN ECONOMIC OVERSIGHT FRAMEWORK; AND
- ESTABLISHMENT OF APPROPRIATE PERFORMANCE MANAGEMENT SYSTEMS AND A CONSULTATION MECHANISM WITH USERS AND OTHER INTERESTED PARTIES

AIRPORT GOVERNANCE

- REGARDLESS OF THE ORGANIZATIONAL FORMAT, ACCORDING TO ICAO'S POLICIES ON CHARGES IN DOC 9082, STATE IS ULTIMATELY RESPONSIBLE FOR SAFETY, SECURITY AND, IN VIEW OF THE POTENTIAL ABUSE OF DOMINANT POSITION BY AIRPORTS, ECONOMIC OVERSIGHT OF THEIR OPERATIONS (DOC 9082, SECTION I, PARAGRAPH 6).
- WHENEVER AN AUTONOMOUS ENTITY IS ESTABLISHED, WHETHER GOVERNMENT OR PRIVATE, STATE SHOULD ENSURE THAT ALL RELEVANT OBLIGATIONS OF THE STATE SPECIFIED IN THE CHICAGO CONVENTION, ITS ANNEXES AND IN AIR SERVICES AGREEMENTS ARE COMPLIED WITH AND THAT ICAO'S POLICIES AND PRACTICES ARE OBSERVED (DOC 9082, SECTION I, PARAGRAPH 7)
- WITH REGARDS TO THEIR RESPONSIBILITY FOR SAFETY, STATES SHOULD ENSURE THAT AIRPORTS UNDERGOING CHANGES OF OWNERSHIP AND CONTROL STRUCTURES ARE SUBJECT TO A CERTIFICATION PROCEDURE IN ACCORDANCE WITH THE STANDARDS AND RECOMMENDED PRACTICES IN ICAO ANNEX 14 – AERODROMES, VOLUME I – AERODROME DESIGN AND OPERATIONS, TO THE CHICAGO CONVENTION AS WELL AS OTHER RELEVANT ICAO SPECIFICATIONS, AND AS OUTLINED IN THE MANUAL OF CERTIFICATION OF AERODROMES (DOC 9774)

GOVERNMENT OWNERSHIP AND CONTROL

- GOVERNMENT DEPARTMENT
  - HEAD REPORTS TO THE GOVT DIRECTLY
  - FUNDED BY GOVT , USER CHARGES RETAINED
  - NOT SUBJECT TO TAXES
  - CLEAR SEPARATION OF REGULATORY AND OPERATIONAL FUNCTIONS REQUIRED
  - GREATER AUTONOMY FOR THE HEADS

GOVERNMENT OWNERSHIP AND CONTROL

- GOVERNMENT OWNED AUTONOMOUS ENTITIES
  - INDEPENDENT ENTITY ESTABLISHED ONE OR MORE AIRPORTS
  - CAN FUNCTION LIKE A PRIVATE DEPENDING ON AUTONOMY
  - HAS FOLLOWING ADVANTAGES
    - REVENUES GENERATEDARE TRANSPARENTLY RE-INVESTED IN OPERATING AND DEVELOPING THE FACILITIES
    - ENSURE USERS OF THE AIRPORTS CONTRIBUTE DIRECTLY TO THE UPKEEP AND DEVELOPMENT OF THE FACILITIES THAT THEY USE (USER PAYS PRINCIPLE)
    - REDUCE THE FINANCING BURDEN ON GOVERNMENTS
    - ENCOURAGE THE GROWTH OF A BUSINESS CULTURE (FOR EXAMPLE, CLOSER CONTROL OVER REVENUES AND EXPENSES, QUICKER DECISIONS AND MORE RESPONSIVE ACTIONS, AND GOOD GOVERNANCE), THEREBY INCREASING EFFICIENCY AND IMPROVING THE QUALITY OF SERVICES
    - ENABLE ACCESS TO PRIVATE CAPITAL MARKETS, WHICH MAY ONLY BECOME POSSIBLE WITH A CHANGE IN ORGANIZATIONAL FORMAT BECAUSE OF PUBLIC SECTOR BORROWING RESTRICTIONS; AND ESTABLISH A CLEAR SEPARATION OF THE REGULATORY AND OPERATIONAL FUNCTIONS.

GOVERNMENT OWNERSHIP AND CONTROL

- AUTONOMOUS CIVIL AVIATION AUTHORITY

PRIVATE OWNERSHIP AND CONTROL

- MOTIVATIONS –IMPROVED EFFICIENCY, REDUCING COSTS, RELIEVE STATES FORM INFRASTRUCTURE FINANCING, GAINS FROM SHARES SALES, REGULAR TAX
- LARGE AIRPORTS BECOME AEROTROPOLIS
- KEY FEATURES OF PRIVATISED AIRPORT
  - THERE IS A BOARD OF DIRECTORS FOR THE CORPORATION APPOINTED ACCORDING TO ITS CHARTER;
  - THE PRIVATIZED AIRPORT IS SELF-FINANCING, CHARGES FOR ITS SERVICES, OBTAINS FUNDS FROM THE CAPITAL MARKET, APPLIES COMMERCIAL ACCOUNTING STANDARDS AND PRACTICES, AND NEEDS TO ACHIEVE A FINANCIAL RETURN AS A COMMERCIAL ENTITY
  - THE PRIVATIZED AIRPORT IS SUBJECT TO NORMAL BUSINESS TAXES

PRIVATE OWNERSHIP AND CONTROL

- PRIVATE PARTICIPATION INVOLVEMENT
- HAS 4 DIFFERENT FORMS
  - MANAGEMENT CONTRACT
  - LEASE
  - TRANSFER OF MINORITY OWNERSHIP
  - PRIVATE SECTOR OWNERSHIP

PRIVATE OWNERSHIP AND CONTROL

- MANAGEMENT CONTRACT
  - AIRPORT OR A GROUP OF AIRPORTS IS TRANSFERRED TO A PRIVATE ENTITY FOR A LIMITED PERIOD OF TIME FOR A FEE OR PRE-DETERMINED PAYMENT TERMS
  - CAN BE A LOCAL/NATIONAL CONCERN
  - INTERNATIONAL MANAGING GROUP
  - CONSORTIUM
  - BENEFITS FROM PROFESSIONAL MANAGEMENT
  - DEVELOPMENT OF AIRPORT FACILITIES MAY NOT BE INCLUDED

PRIVATE OWNERSHIP AND CONTROL

- LEASE OR CONCESSION
  - SHORT OR MEDIUM OR LONG TERM
  - MANAGEMENT AND DEVELOPMENT TO PRIVATE ENTITY OR CONSORTIUM
  - PAYMENT CAN BE FULL DOWN PAYMENT / PART DOWN PAYMENT/ ANNUALL PAYMENT
  - BUILD OPERATE TRANSFER (BOT) COMMON FORM
  - FACTORS TO BE KEPT IN MIND
    - AERO/ NON AERO THAT ARE TO BE TRANSFERRED, STANDARDS TO BE APPLIED
    - MASTER PLANS/ INVESTMENT PALNS FOR CONCESSIONS FLEXIBLE
    - ADEQUACY BETWEEN DURATION OF CONTRACT AND MAGNITUDE OF INVESTMENT
    - CONTRACT RESULT OF COMPETITIVE BIDDING
    - CONSESSION BASED ON RISKS
    - FLEXIBILITY TO ADJUST TO NEW CONDITIONS
    - MEASURES TO PREVENT PROBLEMS FROM CONTRACTS

PRIVATE OWNERSHIP AND CONTROL

- **TRANSFER OF MINORITY OWNERSHIP**
  - **SALE OF SHARES**
  - **SOMETIMES FIRST STAGE OF PRIVATISATION**
- **PRIVATE SECTOR OWNERSHIP AND CONTROL**
  - MAJORITY OR FULL OWNERSHIP INCLUDING NON PROFIT CORPORATIONS
- **PRIVATE SECTOR OWNERSHIPAND/OR OPERATIONS OF PARTS**
  - **CERTAIN FACILITIES/SERVICES TRANSFERED**

AIRPORT SYSTEMS, NETWORKS AND ALLIANCES

- SYSTEM – 2 OR MORE AIRPORTS SERVING SAME METRO AREA, SINGLE OWNERSHIP
- NETWORK – GROUP OF AIPRORTS UNDER SINGLE OWNERSHIP
- ALLIANCES – BETWEEN DIFFERENT GROUPS/ MULTINATIONAL
- ADVANTAGES
  - SMALLER AIRPORTS BENEFIT
  - STATE BENEFITS
  - ECONOMIES OF SCALE
  - BETTER ACCESS TO CAPITAL MARKETS
  - BETTER MANAGEMENT OF CAPACITY
  - BETTER USE OF RESOURCES
- DISADVANTAGES
  - CROSS SUBSIDISATION

CORPORATE GOVERNANCE

- OVERSEEING THE RUNNING OF A COMPANY OR ENTITY BY ITS MANAGEMENT AND ITS ACCOUNTABILITY TO SHAREHOLDERS AND OTHER INTERESTED PARTIES
- MORE IMPORTANT WHEN AIRPORT IS SEPARATED FROM THE OWNERSHIP AND AIRPORT IS DEPENDED ON EXTERNAL CAPITAL
- PROVIDES ASSURANCE FOR ALL INTERESTED PARTIES
- GUIDELINES ARE FROM ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT PRINCIPLES OF CORPORATE GOVERNANCE
- BEST PRACTICERS NEEDED
  - CLEARLY DEFINED OBJECTIVES AND RESPONSIBILITIES
  - EQUITABLE TREATMENT OF SHAREHOLDERS
  - INDEPENDENT, PROFESSIONAL SUPERVISORY BOARD
  - EMPOWERED ACCOUNTABLE MANAGEMENT
  - GOOD RELATIONSHIPS WITH ALL PARTIES THROUGH CONSULTATION
  - TIMELY AND ACCURATE INFORMATION DICLOSURE

INTERNAL ORGANISATION

- DEPENDS ON THE FUNCTIONS BASED ON SIZE, MIX OF TRAFFIC, AREAS OF RESPONSIBILITY ETC
- MAIN FUCNTIONS ARE
  - AIR TRAFFIC OPERATIONS
  - OPERATION OF AIRPORT FACILITIES
  - ENGINEERING, CONSTRUCTION AND MAINTENANCE
  - GROUND HANDLING
  - SECURITY, IMMIGRATION, HEALTH AND CUSTOMS
  - ADMINISTRATION AND FINANCE
  - MARKETING AND PUBLIC RELATIONS
  - ORGANISATIONAL STRUCTURE

AIRPORT ORGANISATION

- GENERAL ORGANISATIONAL STRUCTURE
  - AIRPORT ORGANISATION BASED ON THRUST AREAS AND BASIC MANAGEMENT APPROACH
  - INFLUENCED BY AIRPORT MISSION, STRATEGIC OBJECTIVES, CORPORATE SETTING AND SELF-SUFFICEINCY OBJECTIVES
  - BUREAUCRATIC MODELS – MULTI LAYERED STRUCTURE WITH CENTRALISED AUTHORITY
  - COMMERCIAL MODELS – PROFIT CENTRED WITH FLAT PYRAMIDS

AIRPORT ORGANISATION

- AIRPORT BUSINESS PLANNING
  - ENSURES UNITY OF ACTION
  - DEVELOP PLAN OF ACTION
  - ALIGN EMPLOYEE GOALS
  - STRATEGIC PLAN
    - VISION/MISSION STATEMENT, OBJECTIVES, STRATEGIES, POLICIES, VALUES
    - LONG TERM
  - MASTER PLAN
  - SUPPORTING PLAN
    - COMMERCIAL, RETAIL SALES, CAPITAL, INVESTMENT AND FINANCIAL PLANS
  - BUSINESS PLAN
    - BUSINESS ORIENTED, RESPONDS TO CHANGING ENVIRONMENT
    - EVALUATES AIRPORT PERFORMANCE

AIRPORT ORGANISATION

- **VALUES IDENTIFIED DEMONSTRATE OUTLOOKS**
  - **GVK MUMBAI**
    - **CUSTOMER FOCUS**
    - **PASSION FOR EXCELLENCE**
    - **TEAMWORK**
    - **RESPECT**
    - **PERFORMANCE DRIVEN**
    - **INTEGRITY**
  - **MANCHESTER AIRPORT (UK)** STATES ITS' VALUES ARE;
    - **CUSTOMER SATISFACTION**
    - **EXCELLENCE**
    - **PROFITABILITY**
    - **ENVIRONMENT**
    - **SAFETY**

AIRPORT ORGANISATION

- AIRPORT DEVELOPMENT
  - GREEN FIELD AIRPORTS – BUILT FROM SCRATCH
  - COCHIN, BENGALURU, HYDERABAD
  - EXISTING/BROWN FIELD AIRPORTS
  - DELHI, MUMBAI
- AIRPORT MASTER PLAN
  - LONG TERM DEVELOPMENT
  - SUPPORTS MODERNISATION
  - MASTER GUIDE FOR LAND USE, FRAMEWORK FOR CONTINUOUS PLANNING
  - ICAO ANNEX 14, DOC 9137-AIRPORT SERVICES MANUAL, DOC 8973 –SECURITY ETC

INTERNATIONAL FRAMEWORK UNDER ICAO

- ICAO – INTERNATIONAL CIVIL AVIATION ORGANISATION
- HQ IN MONTREAL, CANADA
- STANDARDS AND RECOMMENDED PRACTICES
  - AIR NAVIGATION
  - INFRASTRUCTURE
  - FLIGHT INSPECTION
  - DEFINES PROTOCOLS FOR ACCIDENT INVESTIGATION
- AIR NAVIGATION COMMISION
- NOT TO BE CONFUSED WITH IATA OR CANSO

INTERNATIONAL FRAMEWORK UNDER ICAO

- STANDARDS
  - RULES OF THE AIR
  - OPERATIONS
  - LISENCING
  - NAVIGATION
  - AERODROMES
  - SAFETY
  - SECURITY
- AERONAUTICAL INFORMATION PUBLICATION
- METEOROLOGY
- STANDARD MACHINIE READABLE PASSPORTS
- INFRASTRUCTURE MANAGEMENT LIKE CNS/ATM

INTERNATIONAL FRAMEWORK UNDER ICAO

- REGISTERED CODES
- AIRPORT CODES FOR ICAO AND IATA DIFFERENT
  - ICAO VOHY IATA HYD
  - ICAO KLAX IATA LAX
- AIRLINE CODES DIFFER
  - ICAO THREE LETTER EG UAL, IGO
  - IATA 2 LETTER UA, IE
  - IN RADIO TELEPHONY UNITED, IFLY

INTERNATIONAL FRAMEWORK UNDER ICAO

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INTERNATIONAL FRAMEWORK UNDER ICAO

REGIONAL OFFICES

- ASIA AND PACIFIC (APAC) – BANGKOK, THAILAND
- EASTERN AND SOUTHERN AFRICAN (ESAF) – NAIROBI, KENYA
- EUROPE AND NORTH ATLANTIC (EUR/NAT) – PARIS, FRANCE
- MIDDLE EAST (MID) – CAIRO, EGYPT
- NORTH AMERICAN, CENTRAL AMERICAN AND CARIBBEAN (NACC) – MEXICO CITY, MEXICO
- SOUTH AMERICAN (SAM) – LIMA, PERU
- WESTERN AND CENTRAL AFRICAN (WACAF) – DAKAR, SÉNÉGAL

INTERNATIONAL FRAMEWORK UNDER ICAO

- *ACI ORGANIZATIONAL GOALS:*
  - MAXIMIZE THE CONTRIBUTIONS OF AIRPORTS TO MAINTAINING AND DEVELOPING A SAFE, SECURE, ENVIRONMENTALLY COMPATIBLE AND EFFICIENT AIR TRANSPORT SYSTEM.
  - ACHIEVE COOPERATION AMONG ALL SEGMENTS OF THE AVIATION INDUSTRY AND THEIR STAKEHOLDERS AS WELL AS WITH GOVERNMENTS AND INTERNATIONAL ORGANIZATIONS.
  - INFLUENCE INTERNATIONAL AND NATIONAL LEGISLATION, RULES, POLICIES, STANDARDS AND PRACTICES BASED ON ESTABLISHED POLICIES REPRESENTING AIRPORTS' INTERESTS AND PRIORITIES.
  - ADVANCE THE DEVELOPMENT OF THE AVIATION SYSTEM BY ENHANCING PUBLIC AWARENESS OF THE ECONOMIC AND SOCIAL IMPORTANCE OF AIRPORT DEVELOPMENT.
  - MAXIMIZE COOPERATION AND MUTUAL ASSISTANCE AMONG AIRPORTS.
  - PROVIDE MEMBERS WITH INDUSTRY KNOWLEDGE, ADVICE AND ASSISTANCE, AND FOSTER PROFESSIONAL EXCELLENCE IN AIRPORT MANAGEMENT AND OPERATIONS.
  - BUILD ACI'S WORLDWIDE ORGANIZATIONAL CAPACITY AND RESOURCES TO SERVE ALL MEMBERS EFFECTIVELY AND EFFICIENTLY

DOMESTIC FRAMEWORK IN INDIA

- AIRPORTS AUTHORITY OF INDIA
  - ORIGINALY NAA AND IAAI IN 1995 BECAME AAI
  - 127 AIRPORTS INCL 11 INTERNATIONAL
  - TOTAL 449 AIRPORTS, 33 NON-OPERATIONAL
- MAIN FUNCTIONS
  - CONSTRUCTION, MODIFICATION & MANAGEMENT OF PASSENGER TERMINALS,
  - DEVELOPMENT & MANAGEMENT OF CARGO TERMINALS,
  - DEVELOPMENT & MAINTENANCE OF APRON INFRASTRUCTURE INCLUDING RUNWAYS, PARALLEL TAXIWAYS, APRON ETC.,
  - PROVISION OF COMMUNICATION, NAVIGATION AND SURVEILLANCE WHICH INCLUDES PROVISION OF DVOR / DME, ILS, ATC RADARS, VISUAL AIDS ETC.,
  - PROVISION OF AIR TRAFFIC SERVICES,
  - PROVISION OF PASSENGER FACILITIES AND RELATED AMENITIES AT ITS TERMINALS THEREBY ENSURING SAFE AND SECURE OPERATIONS OF AIRCRAFT, PASSENGER AND CARGO IN THE COUNTRY

DOMESTIC FRAMEWORK IN INDIA

- AIR NAVIGATION SERVICES
- SECURITY
  - DEPLOYMENT OF CISF FOR AIRPORT SECURITY
  - CCTV SURVEILLANCE SYSTEM AT SENSITIVE AIRPORTS
  - LATEST AND STATE-OF-THE-ART X-RAY BAGGAGE INSPECTION SYSTEMS
  - PREMIER SECURITY & SURVEILLANCE SYSTEMS
  - SMART CARDS FOR ACCESS CONTROL TO VITAL INSTALLATIONS AT AIRPORTS
  - USE OF MODERN TECHNOLOGIES LIKE ARTIFICIAL INTELLIGENCE AT AIRPORTS
- TRAINING
  - NIAMAR/INDIAN AVIATION ACADEMY, DELHI
  - CATC, ALLAHABAD
  - FIRE TRAINING CENTRES AT DELHI & KOLKOTA

DOMESTIC FRAMEWORK IN INDIA

- REGULATORY AUTHORITIES
  - AAI
  - DGCA
    - THE OVERALL FUNCTIONS OF DGCA INCLUDE REGULATION OF AIR TRANSPORT SERVICES TO/FROM/WITHIN/OVER INDIA BY INDIAN AND FOREIGN OPERATORS, REGISTRATION OF CIVIL AIRCRAFT, FORMULATION OF AIR SAFETY AND AIRWORTHINESS STANDARDS FOR CIVIL AIRCRAFT REGISTERED IN INDIA AND GRANT OF CERTIFICATES OF AIRWORTHINESS TO SUCH AIRCRAFT.
    - IT OVERSEES THE LICENSING OF PILOTS, AIRCRAFT MAINTENANCE ENGINEERS, FLIGHT ENGINEERS AND AIR TRAFFIC CONTROLLERS.
    - IT ALSO COORDINATES ALL REGULATORY FUNCTIONS WITH INTERNATIONAL CIVIL AVIATION ORGANISATION (ICAO)

DOMESTIC FRAMEWORK IN INDIA

- REGULATORY AUTHORITIES
  - AIRPORT REGULATORY AUTHORITY OF INDIA (AERA)
    - TO DETERMINE THE TARIFF FOR THE AERONAUTICAL SERVICES TAKING INTO CONSIDERATION.
      - THE CAPITAL EXPENDITURE INCURRED AND TIMELY INVESTMENT IN IMPROVEMENT OF AIRPORT FACILITIES.
      - THE SERVICE PROVIDED, ITS QUALITY AND OTHER RELEVANT FACTORS.
      - THE COST FOR IMPROVING EFFICIENCY.
      - ECONOMIC AND VIABLE OPERATION OF MAJOR AIRPORTS.
      - REVENUE RECEIVED FROM SERVICES OTHER THAN THE AERONAUTICAL SERVICES.
      - THE CONCESSION OFFERED BY THE CENTRAL GOVERNMENT IN ANY AGREEMENT OR MEMORANDUM OF UNDERSTANDING OR OTHERWISE.
      - ANY OTHER FACTOR WHICH MAY BE RELEVANT FOR THE PURPOSES OF THIS ACT.
    - TO DETERMINE THE AMOUNT OF THE DEVELOPMENT FEES IN RESPECT OF MAJOR AIRPORTS

DOMESTIC FRAMEWORK IN INDIA

- REGULATORY AUTHORITIES
  - TO DETERMINE THE AMOUNT OF THE PASSENGERS SERVICE FEE LEVIED UNDER RULE 88 OF THE AIRCRAFT RULES, 1937 MADE UNDER THE AIRCRAFT ACT, 1934.
  - TO MONITOR THE SET PERFORMANCE STANDARDS RELATING TO QUALITY, CONTINUITY AND RELIABILITY OF SERVICE AS MAY BE SPECIFIED BY THE CENTRAL GOVERNMENT OR ANY AUTHORITY AUTHORIZED BY IT IN THIS BEHALF.
  - TO CALL FOR SUCH INFORMATION AS MAY BE NECESSARY TO DETERMINE THE TARIFF UNDER CLAUSE (A).
  - TO PERFORM SUCH OTHER FUNCTIONS RELATING TO TARIFF, AS MAY BE ENTRUSTED TO IT BY THE CENTRAL GOVERNMENT OR AS MAY BE NECESSARY TO CARRY OUT THE PROVISIONS OF THIS ACT.
- BUREAU OF CIVIL AVIATION SECURITY (BCAS)
- ICAO
- ACI

DOMESTIC FRAMEWORK IN INDIA

REGULATORY SHORT COMINGS

- **AIRPORT AUTHORITY OF INDIA (AAI)**
  - FOR THOSE AIRPORTS NOT UNDER THE MANDATE OF AERA, IT IS BOTH THE OPERATOR AS WELL AS THE REGULATOR. AN INDEPENDENT REGULATOR IS REQUIRED
  - IT HAS REGULATORY OVERLAP IN MANY AREAS WITH DGCA E.G. SLOT ALLOCATION, HEIGHT OF BUILDINGS IN PROXIMITY TO AIRPORTS ETC
- **AIRPORT ECONOMIC REGULATORY AUTHORITY OF INDIA (AERA)**
  - AERA'S MANDATE IS LIMITED TO MAJOR AIRPORTS
  - IT MONITORS SERVICE STANDARDS BUT HAS NO POWERS OF ENFORCEMENT
  - SECTION PERTAINING TO ESTABLISHMENT OF APPELLATE AUTHORITY IS NOT NOTIFIED
  - SLOT ALLOCATION AND ROUTE DISPERSAL ARE ECONOMIC ISSUES AND SHOULD COME UNDER AERA
- **DIRECTORATE GENERAL OF CIVIL AVIATION (DGCA)**
  - OVERLAP WITH AAI NEEDS TO BE ADDRESSED
  - SERIOUS CAPACITY CONSTRAINTS IN MONITORING AND REGULATING AIR SAFETY ISSUES

THANK YOU