Terminal Management

Ministry of Civil Aviation

Egyptian Aviation Academy

CAMTC

وزارة الطيران المدنى

الأكاديمية المصرية لعلوم الطيران

كلية الدراسات المتخصصة

Course Topics

Day 1	Subject
1	Ancillary session
2	English language * Brief synopsis * Common mistakes in English * What to say when!
3	Aviation entities - Global - Egyptian
4	Airport design and landscaping - Airside - Landside - Terminal areas & facilities
5	Way finding
Day 2	**Subject**
6	Flight info. management system
7	Aircraft
8	Journey of a flight - Departure - Arrival
9	Journey of a passenger - Departure - Arrival
10	Booking a ticket
Day 3	**Subject**
11	Airside physical characteristics
12	Stand allocation

Day 4	Subject
13	Pax / Baggage screening - Procedures - equipment - Prohibited / restricted objects
14	Check in process - CUETE - Systems - Scale & belt - Queuing - Baggage handling
15	Passport control/ immigration
16	Terminal security & fire protection
Day 5	**Subject**
17	Organizational chart & Escalation Procedures
18	Aerodrome triangle
19	- Airport service quality ASQ - Hub airport concept
20	Operations & Terminal units
21	ICAO Phraseology * radiotelephony alphabet * Standard * recommended practice
Day 6	**Subject**
22	Terminal management
23	Managing airline operators& ground handlers
24	Working with governmental agencies
Day 7	**Subject**
25	ICAO annexes
26	Enhancing airport passenger experience (IATA new trends) * Towards a paperless environment * Simplifying the business * Fast travel • Check point of the future and • Final discussion

Day 8	Subject
28	Airport performance indicators
29	Principles of Airline Flight Operation Safety
Day 9	**Subject**
30	Airline Delays Affected Terminal Operations
31	Aerodrome Emergency Plans AEP
Day 10	**Subject**
32	Wrap up discussion - Evaluation
33	Abbreviations & terminology

Preface:

Airport Terminal Management

Airports are probably the most complex organizations in aviation. Airports are often presented as a city within a city where anything can happen and sometimes does. Airport managers must have the capacity to deal with complex and sometimes political issues.

This course provides you with an understanding of the complexities of running an airport terminal, common challenges faced by duty terminal managers and the drivers of competition between major hub airports.

WHAT YOU WILL LEARN

Upon completion of this course, you will be able to:

- Explain the passenger terminal planning concepts, areas and functions
- Understand the standard operating procedures in managing an efficient airport
- Identify the key drivers of customer satisfaction
- Identify the key areas for improvement in airport terminal operations
- Apply best practices to solve common issues faced by airport users
- Gain practical knowledge to manage the various challenges faced by airport stakeholders

Brief synopsis about English

- Adaptation and originality
- English Phonetics
- English Vs. Arabic

Common mistakes

- What / which

Tenses

‘s / s’ / s’s

- Modal verbs

Shall **Can** **Must** **Could**

Will **Have to** **May** **Should**

Might **Had to** **Would** **Ought to**

What to say **when** ??

- Hello / Hi
- How do you do! - How are you? How is life?
- So far so good
- Ok / all right
- May I have your passport please?
- With pleasure
- Here you are
- Help yourself
- May it give wholesome
- Would you care for a drink?
- Yes, please. No, thanks
- Thanks a lot / You're welcome
- Sorry / Never mind
- May I take leave?

- Congratulations
- Cheer up!
- Courage!
- How wonderful!
- What a pity! - Dear me!
- Hold on! - Don’t hang up!
- Who is it?
- It’s Ahmed
- Would you like?
- Yes, Please/No thanks
- Do you like?
- Yes, I do …./ Me too
- No, I don’t / Me neither
- How about going to the movies!
- How do you like your tea/ How would you like your tea?

Aviation Entities

Global →

IATA

ACI
AIRPORTS COUNCIL INTERNATIONAL

Egyptian →

- Ministry of civil Av.
- ECAA
- EHCAAN
- CAC
- EAC
- NANSC
- MET/AVIT
- Air Transport
- Civil Av. Academy

Airport design

- **Airside**
- Runways
- Taxiways
- Taxi lanes
- Parking stands
- Hangers
- Service Roads

Airport Design

Landside •

Halls •

Curbside •

Car Parks •

Access roads •

Way Finding systems

An effective way finding system is based on human behavior and consists of the following characteristics:

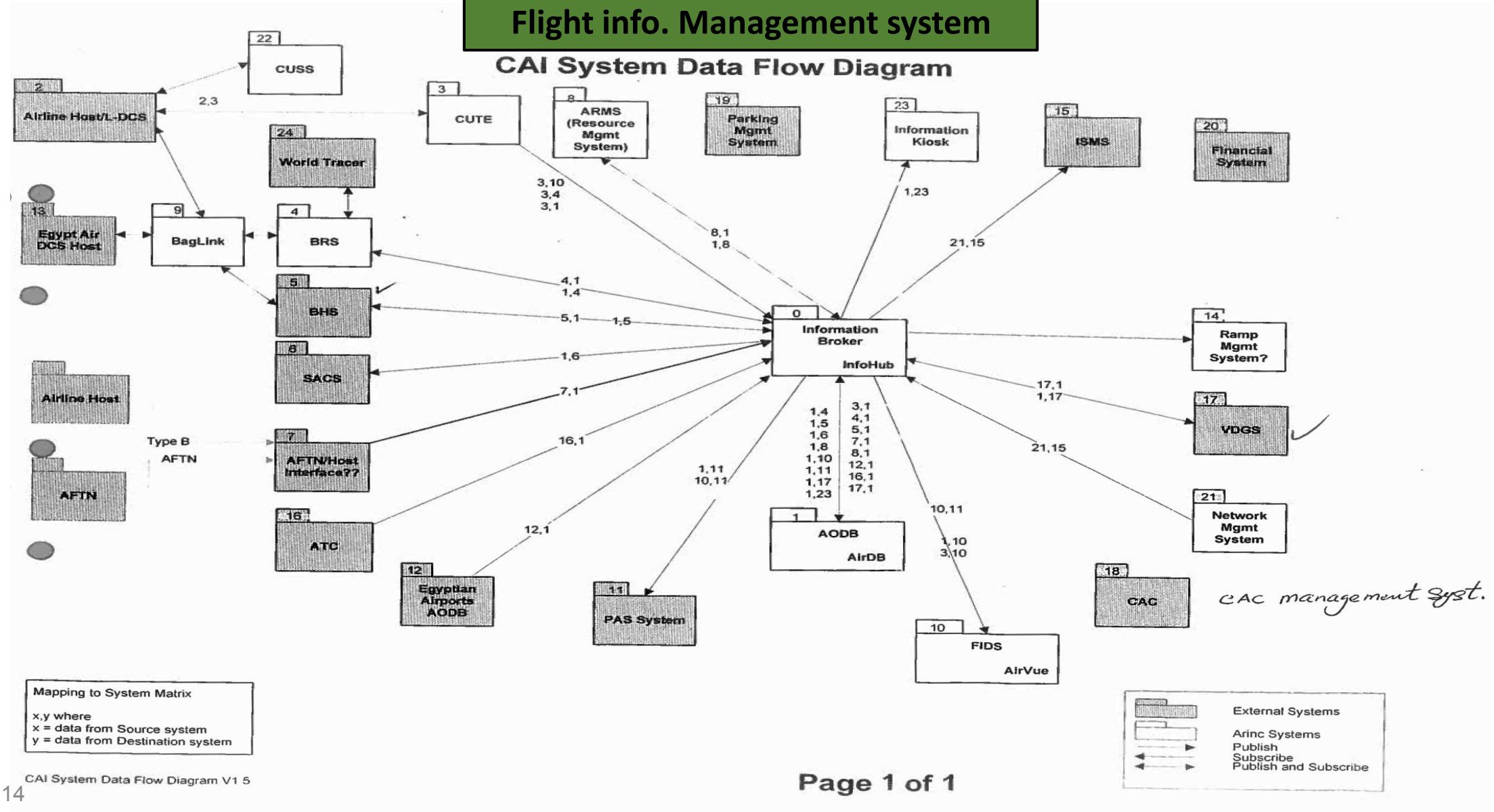
* *Do not make them think*
* *Create a comprehensive, clear and consistent visual communication system with concise messaging.*
* *Show only what is needed*
* *Show information what relevant is to the space, location and / or navigation path.*
* *Remove excessive information*
* *Remove unnecessary elements to create a clear visual environment ahead*

Way Finding

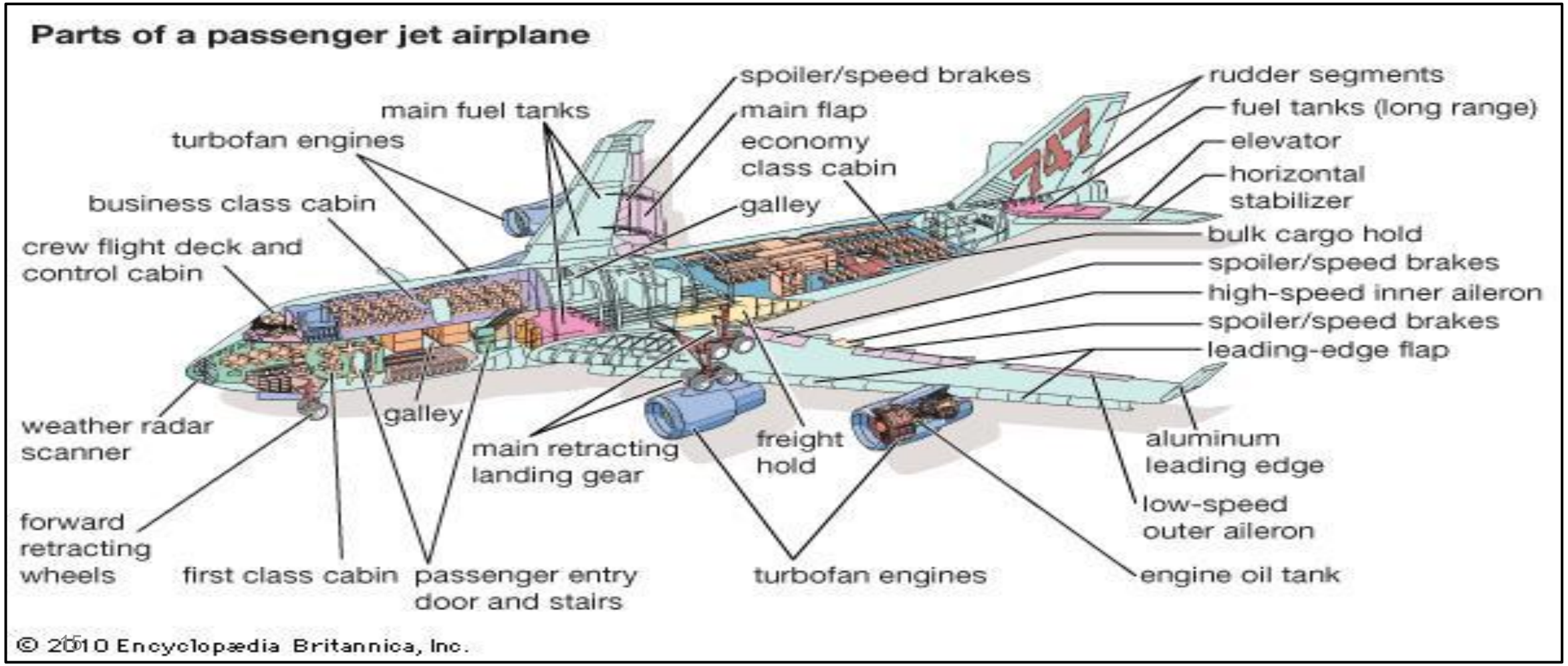

NEW WAYFINDING SYSTEM
WELCOME
DEPARTURE
ARRIVAL
EMERGENCY DOOR
EXIT
PASSPORT
IMMIGRATION
MEN
WOMEN
TOILET SYMBOLS
TRANFER
WAITING ROOM
NO PARKING
NO SMOKING
NO ENTRY
INFORMATION CENTRE
FIRST AID
AUCKLAND AIRPORT
SMOKING
RESTAURANT
EAT
HELLO
TELEPHONE
KIDS ROOM
LIFT
ESCALATOR
UP
DOWN
TRAVELLERS
NEW ZEALAND SHOPPING
DUTY FREE
TAXI
BUS
CURRENCY EXCHANGE
NEW ZEALAND DOLLAR
CAR PARKING
INTERNET SECURITY
ARROW
SOUVENIRS FOR FRIENDS FAMILY
LOST & FOUND LOCKER
DRINKING FOUNTAIN
CUSTOMS
BAGGAGE
Auckland Airport


Westfield
Westfield

Flight info. Management system



Aircraft Design



aircraft codes

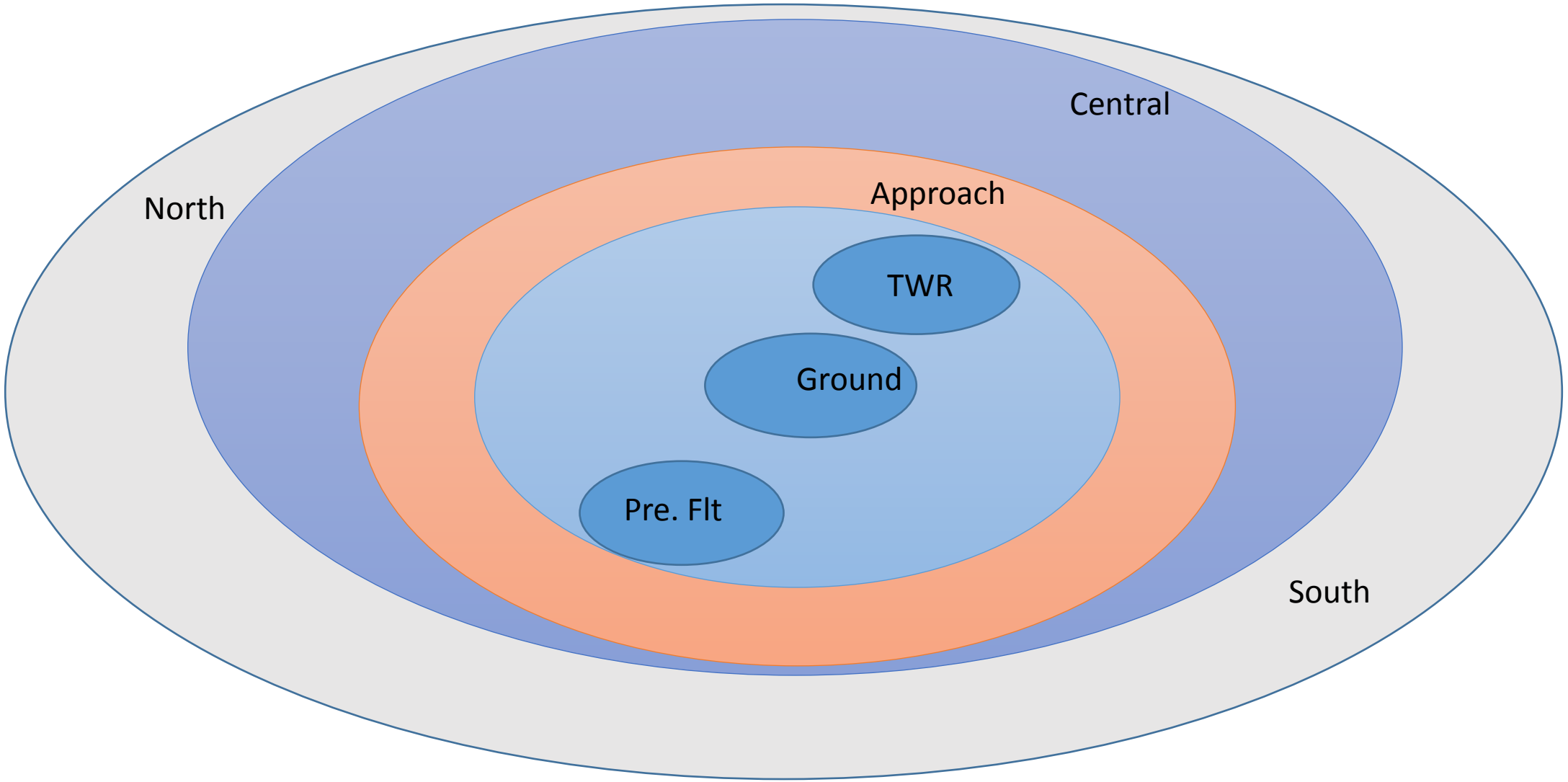
A = WS < 15 m
B = WS 15 - < 24 m
C = WS 24 – < 36 m
D = WS 36 – < 52 m
E = WS 52 – < 65 m
F = WS 65 - < 80 m

Narrow body aircraft = dia. / fuselage 3-4m & 1aisle & 2-2 or 3-3 seats & max pax around 280
Wide body aircraft = dia. 6m & 2aisle & 3-4-3 seats & max pax up to 800

Classes of service on : (P/ F) 1ST & (J) business & (Y l N) economy

Passenger

Flight



Journey of a flight

Passenger

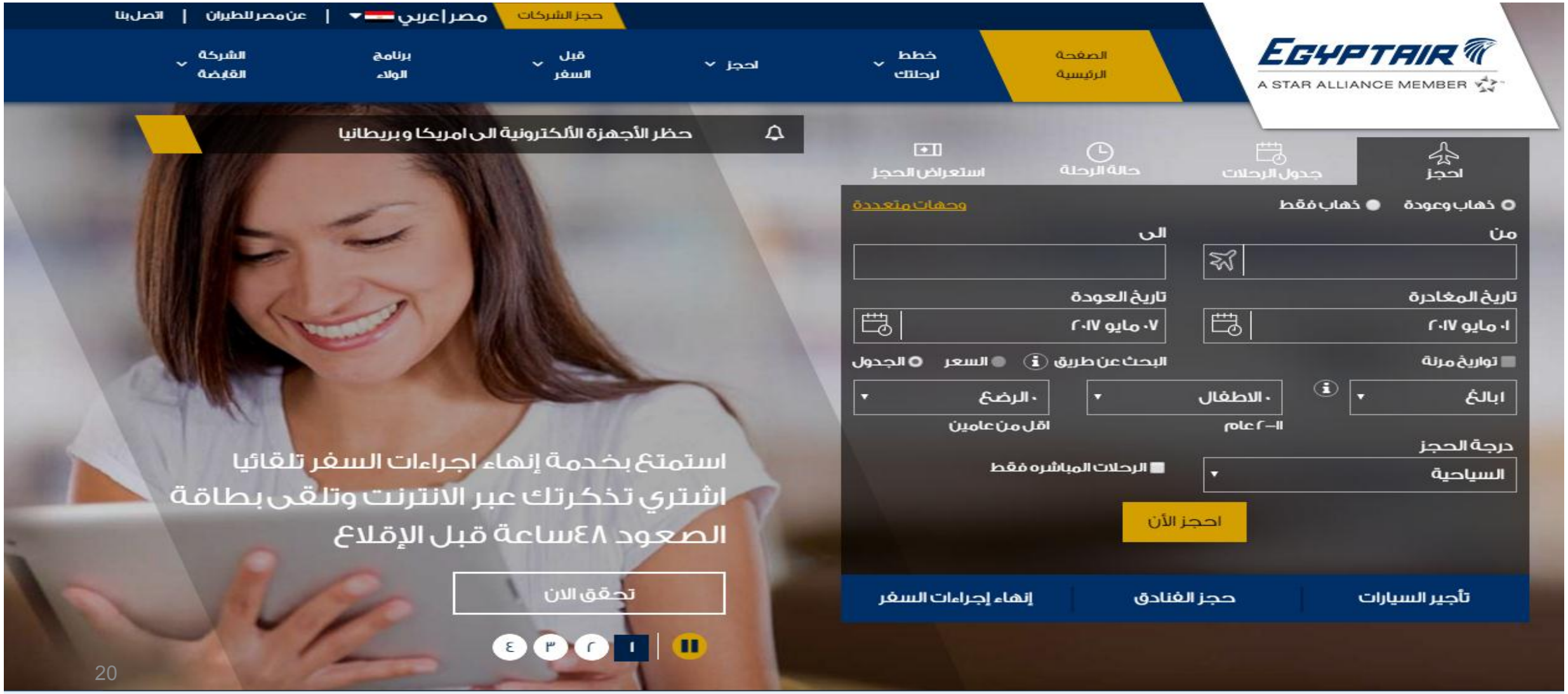
Departure

- Access road
- Toll station
- Car park
- Curbside
- Greeters' area
- Pax Entries
- Check in
- Immigration (passport control)
- Duty Free
- Concourse- Pier
- Boarding Gate
- PLB (bus)
- Aircraft

Arrival

- Aircraft
- PLB (bus)
- Concourse- Pier
- Immigration (passport control)
- Conveyor Belt
- Customs
- Meeters' area
- Curbside
- Car park
- Toll station
- Access road

Ticket booking



Pax/ baggage screening

* Procedures

* Equipment

* Privacy booth

* Prohibited / restricted items

What is the purpose of the security checkpoint?

? Find and confiscate prohibited items and dangerous goods, and initiate escalation procedures

Check in process

- CUETE
- ATB-BTP-OCR-PC – UPS
- DCS
- Scale & belt
- **Queuing**
- Baggage
- Size
- Weight
- Tagging

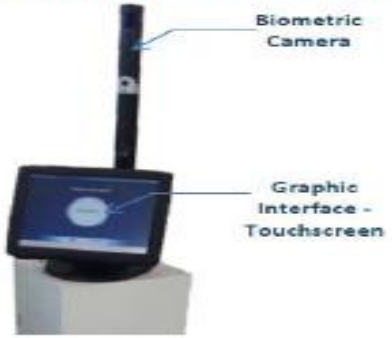
Check-in process

PNR data collected at time of booking

Data sent to NBTC
Assessed against risk rules
Risk category assigned and notified to airline DCS

ID and biometric capture kiosk

Bag drop kiosk



Biometric identification

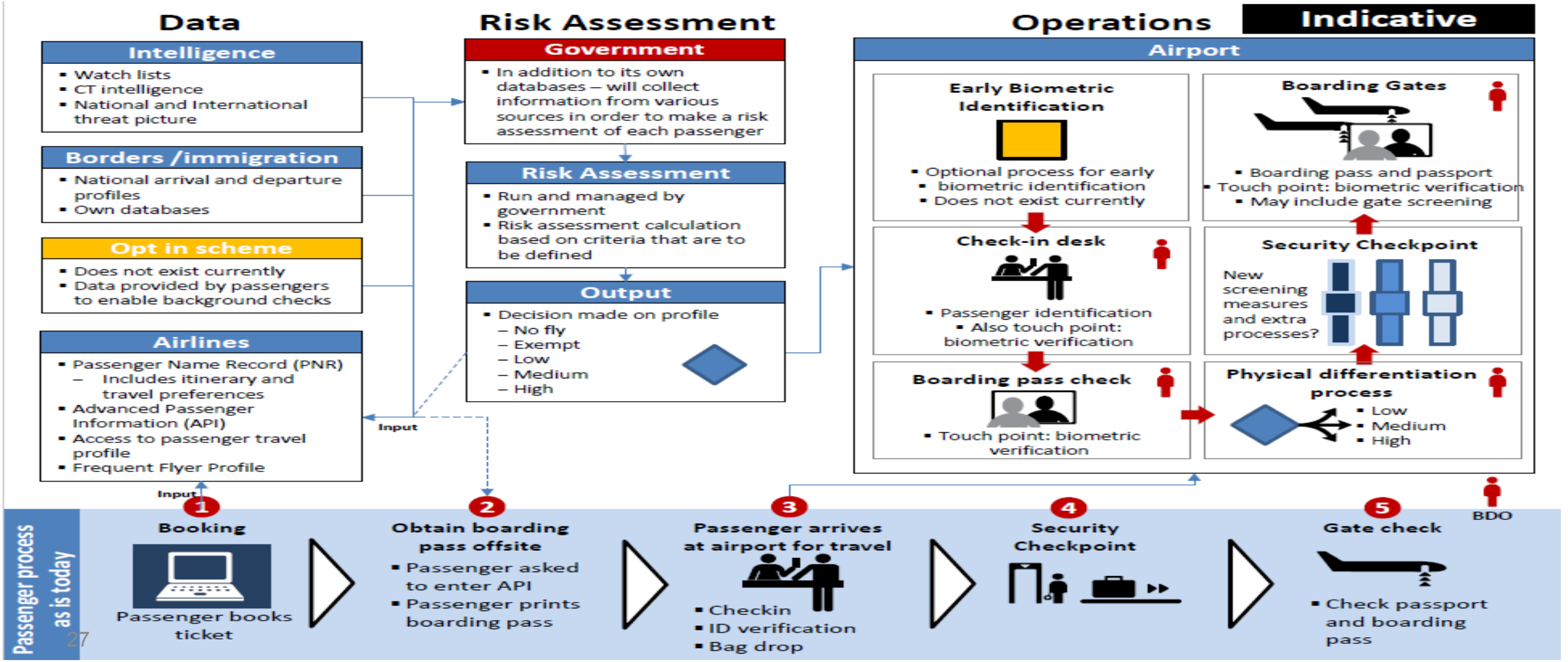
Differentiated security process delivered

Passport Control/ Immigration

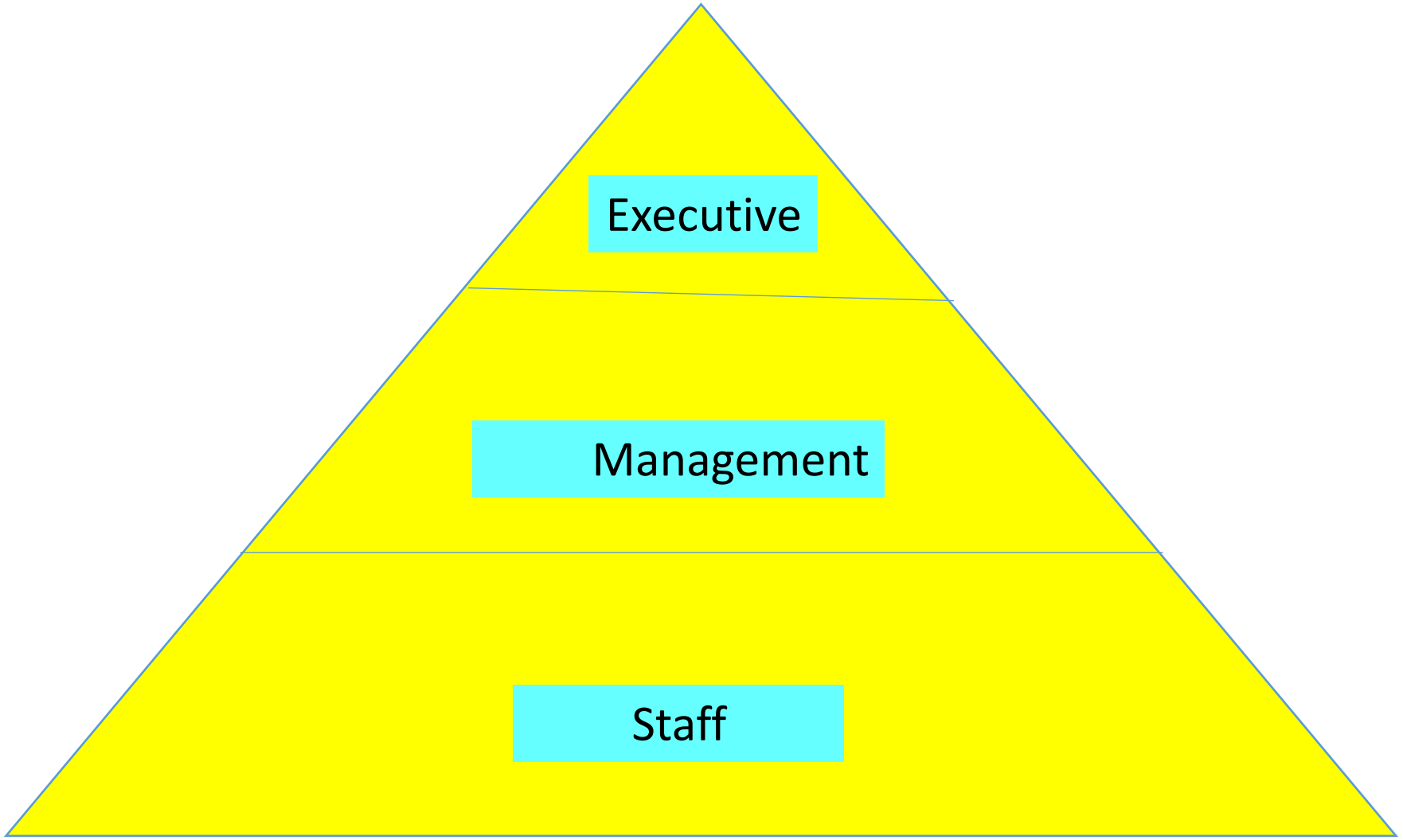
Airport security & fire fighting
Passenger Risk Differentiation

- Enhanced and more targeted security
- Increased Operational Efficiency
- Improved passenger experience

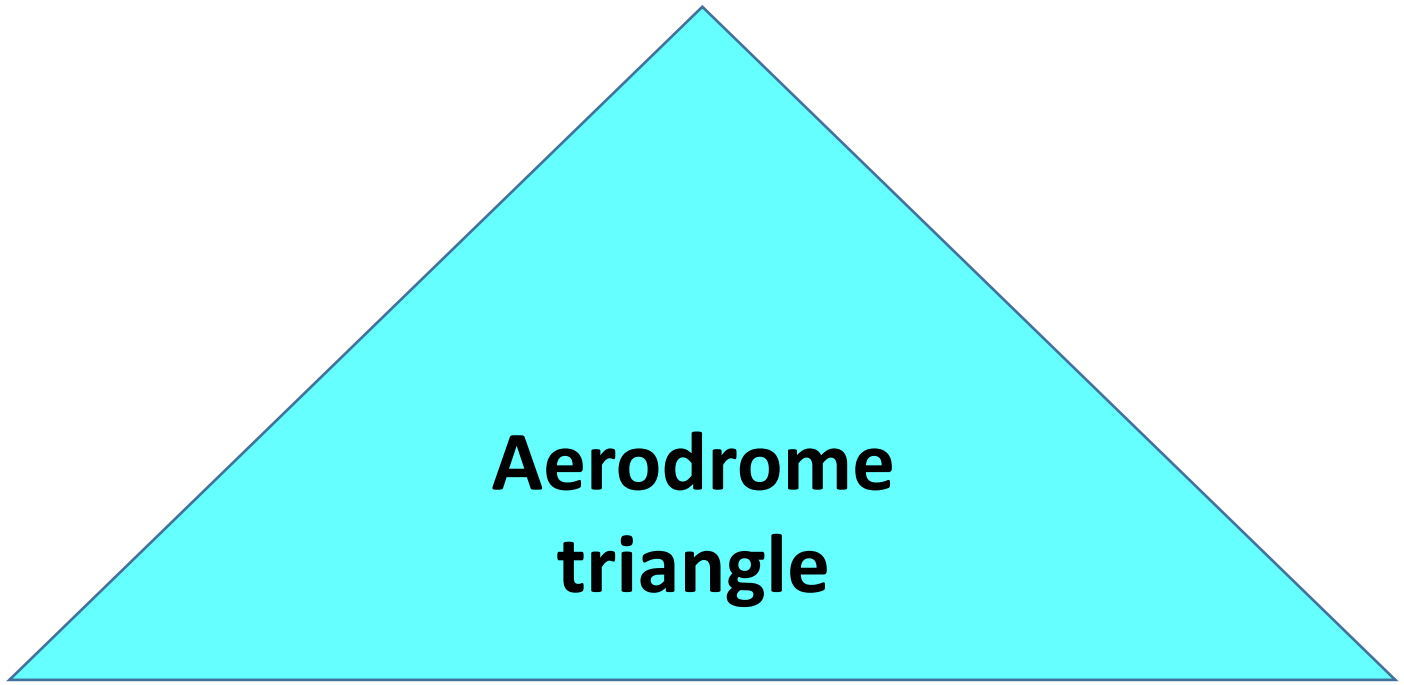
Passenger differentiation



Organizational chart & Escalation Procedures



Aerodrome operator



ATC

Pilot (airlines)

Airport Service Quality ASQ

* Quality?

To be always meeting the customers' expectations.

* Total Quality?

To achieve quality at low cost.

How To Improve Quality !

- Motivation
- Education
- Inspection
- Admin. Support
- Improvement Team
- Technology
- Process Control

What to do

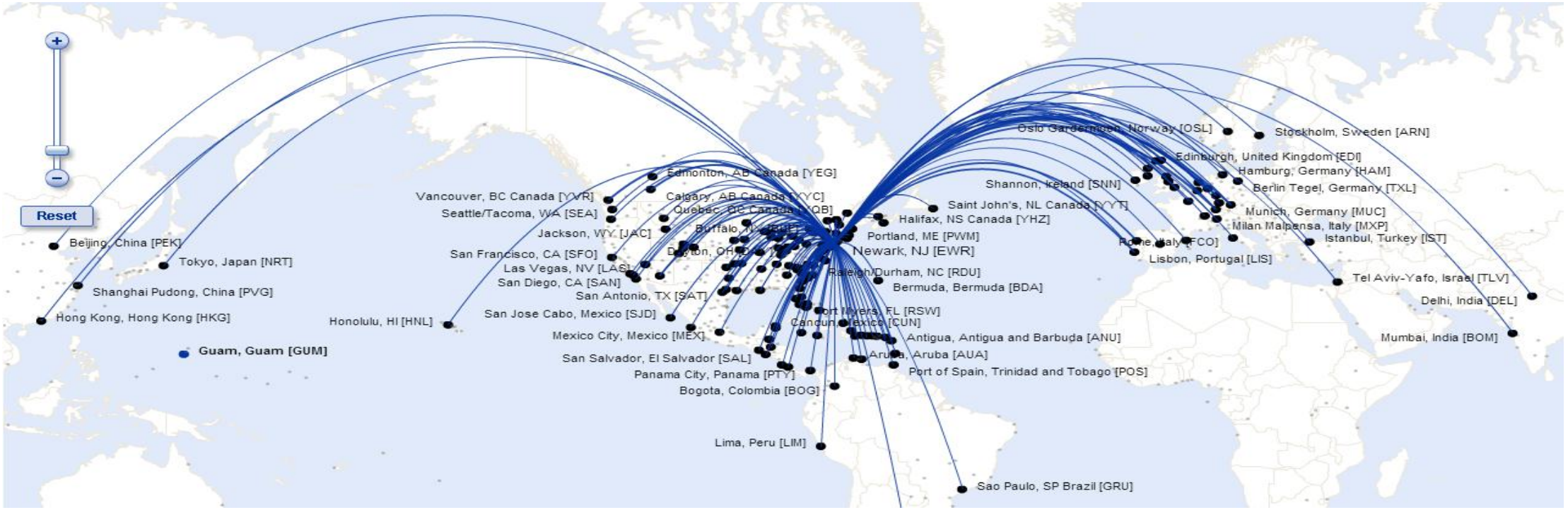
Plan

Do

Control

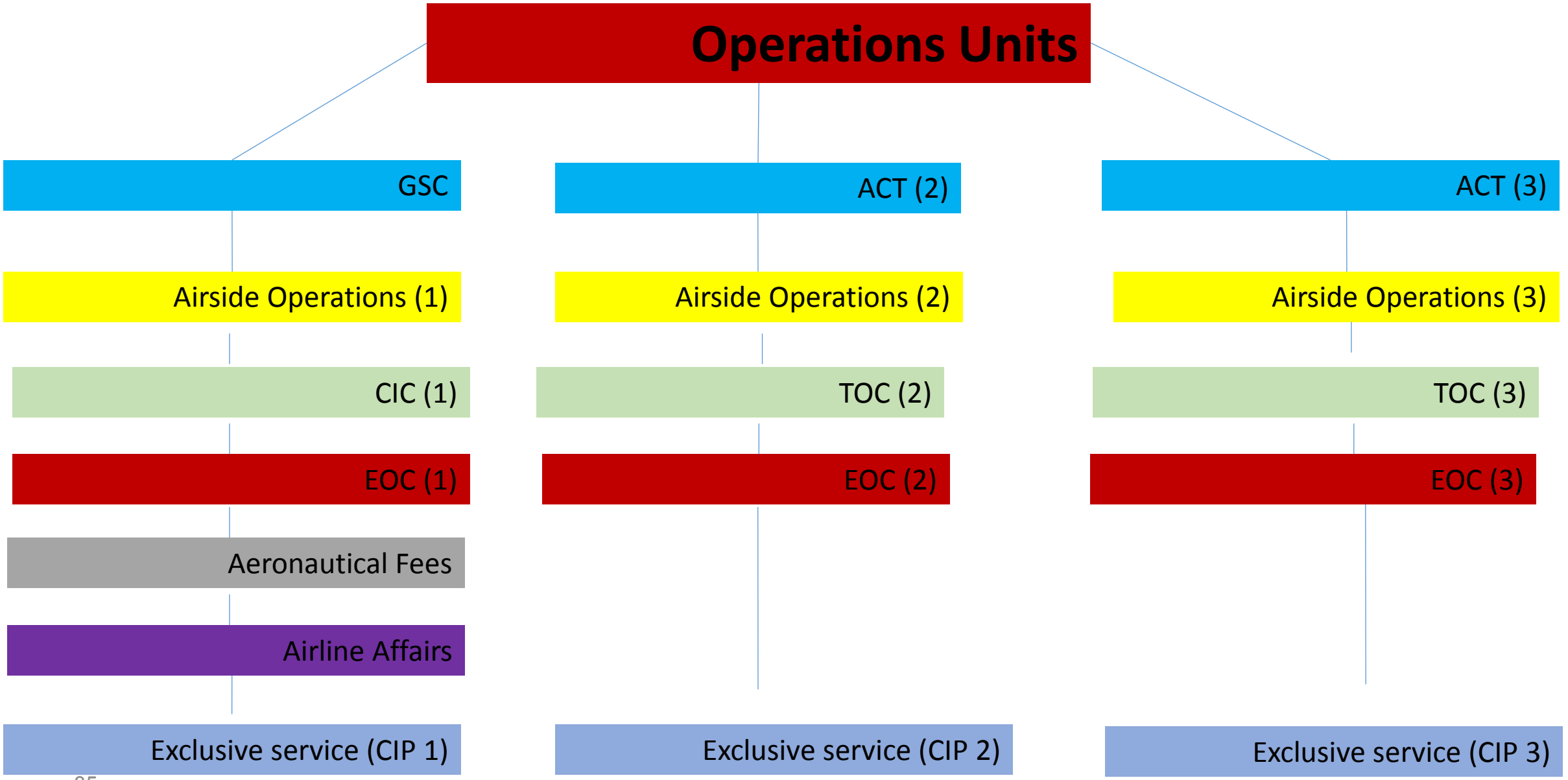
Assess

Hub Airport Concept



A **hub airport** is an airport that an airline uses as a transfer facility for passengers who need to change planes to reach a destination. If you are an originating passenger at a hub, you can generally expect nonstop flights to a large number of destinations. **"fortress hub"**, is an airport where a single airline controls more than 70% of all passenger traffic in and out.

- **Passengers benefits include:**
- Easier access to and from the airport due to more infrastructure surrounding it (e.g. trains, buses and roads);
- A greater choice of holiday and business destinations;
- More frequent flights to destinations;
- Cheaper fares due to competition between airlines.


Operations Units
GSC
ACT (2)
ACT (3)
Airside Operations (1)
Airside Operations (2)
Airside Operations (3)
CIC (1)
TOC (2)
TOC (3)
EOC (1)
EOC (2)
EOC (3)
Aeronautical Fees
Airline Affairs
Exclusive service (CIP 1)
Exclusive service (CIP 2)
Exclusive service (CIP 3)

Terminal units

Information

Public relations

Exclusive (CIP)

coordinators

Area managers

Duty managers

Ministry of Civil Aviation
Egyptian Aviation Academy
CAMTC

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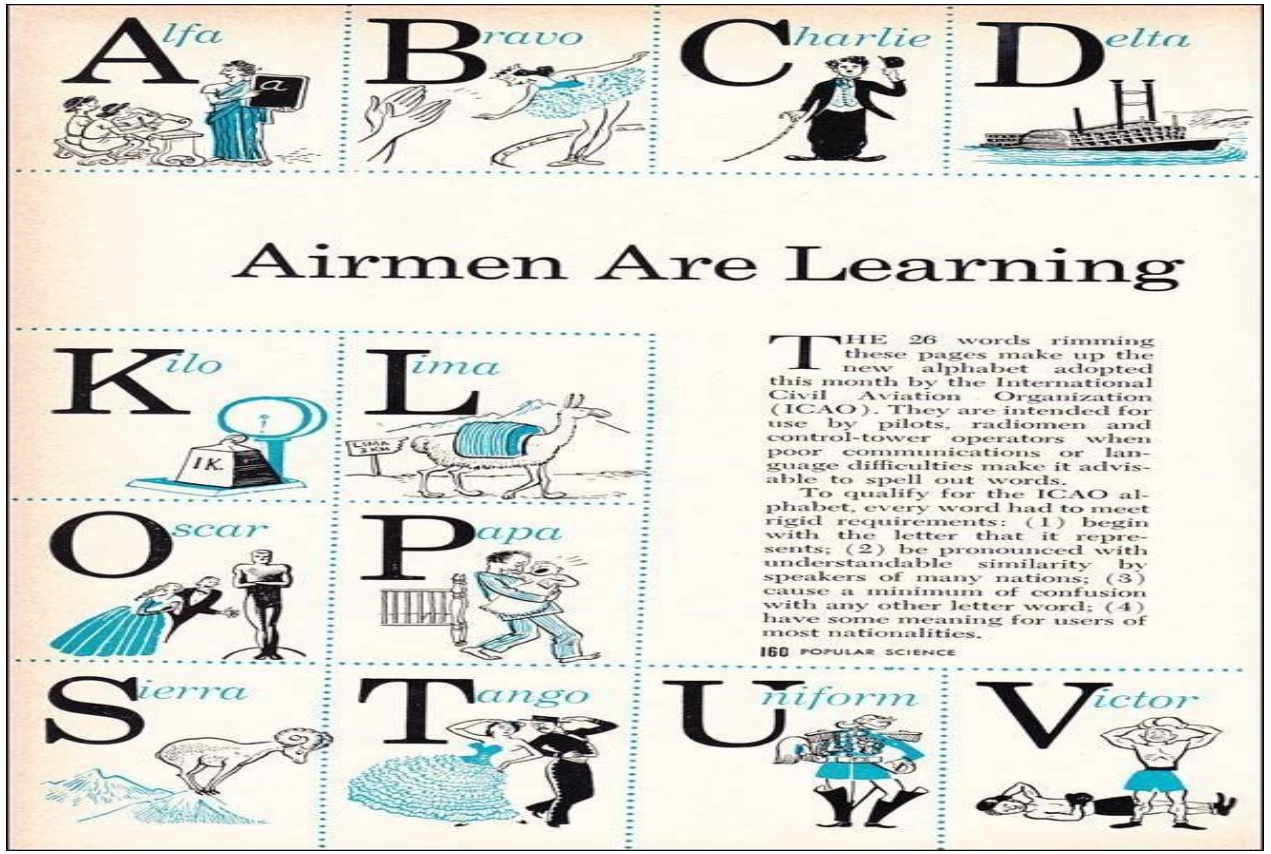
كلية الدراسات المتخصصة

ICAO phraseology

International radiotelephony alphabet



ICAO Phraseology :

- **Wording**

***Mandatory =** Standard format / **shall**
e.g, 'Take-off' shall only be used when issuing a clearance to take-off.

Recommended practice =** Italics / ***should + written (recommendation)

e.g., **Recommended practice—** *States **should** certify aerodromes open to public use in accordance with these specifications*
as well as other relevant ICAO specifications through an appropriate regulatory framework.

Example:

Taxi Clearance Limit

All taxi clearances **shall** contain a clearance limit, which is the point at which the aircraft must stop unless further permission to proceed is given.

READ-BACK

Read-back is vital for ensuring mutual understanding between the pilot and the controller of the intended plan for that aircraft.

Noting Down Taxi Clearances

Complex or lengthy taxi clearances should be noted down by crews.

Samples of dialogues between ATC & Pilot:

RTF Taxi Instructions to Departure Runway

Pilot*: Metro Ground, Big Jet 345, request taxi*
ATC: Big Jet 345, Metro Ground, taxi to holding point C, runway 27
Pilot*: Taxi to holding point C, runway 27, Big Jet 345*
ATC: Big Jet 345, contact Metro Tower 119.2
Pilot*: Contact Metro Tower 119.2, Big Jet 345*

Pilot*: Metro Ground, Big Jet 345, request taxi*
ATC: Big Jet 345, Metro Ground, taxi to holding point A1 runway 18
Pilot*: Taxi to holding point A1 runway 18, Big Jet 345*

In the airport environment, the word **'cleared'** shall only be used in connection with a clearance to take-off or land.

***Pilot**: Cairo Tower, Egypt Air 245, approaching holding point 05R*
ATC: *Egypt Air 245*, Cairo Tower, line up runway 05R
***Pilot**: Lining up runway 05R, Egypt Air 245*
ATC: *Egypt Air 245*, runway 05R, cleared for take-off (report airborne)
***Pilot**: Cleared for take-off, Egypt Air 245*
***Pilot**: Airborne, Egypt Air 245*
***ATC**: Airborne, Egypt Air 245, Happy landing.*

Ref: ICAO PHRASEOLOGIES Annex 10, Volume II

ICAO annexes

1- personnel licensing
2- rules of the air
3- meteorological service for INTL air navigation
4- aeronautical charts
5- units of measurement to be used in air and ground ops.
6- operation of aircraft
7- aircraft nationality and registration marks
8- airworthiness of aircraft
9- facilitation
10- aeronautical telecom.
11- air traffic services
12- search and rescue
13- aircraft accident and incident investigation
14- aerodromes
15- aeronautical info. Service
16- environmental protection
17- security safeguarding INTL civil av. Against acts of unlawful interference
18- the safe transport of dangerous goods by air
19- Safety Management

IATA New projects & Trends

Towards a Paperless environment

CAIRO AIRPORT COMPANY
OPERATION SECTOR
FOLLOW ME 1

شركة ميناء القاهرة الجوى
قطاع العمليات
ادارة ارشاد 1

Aircraft Stands Inspection Report 2-A

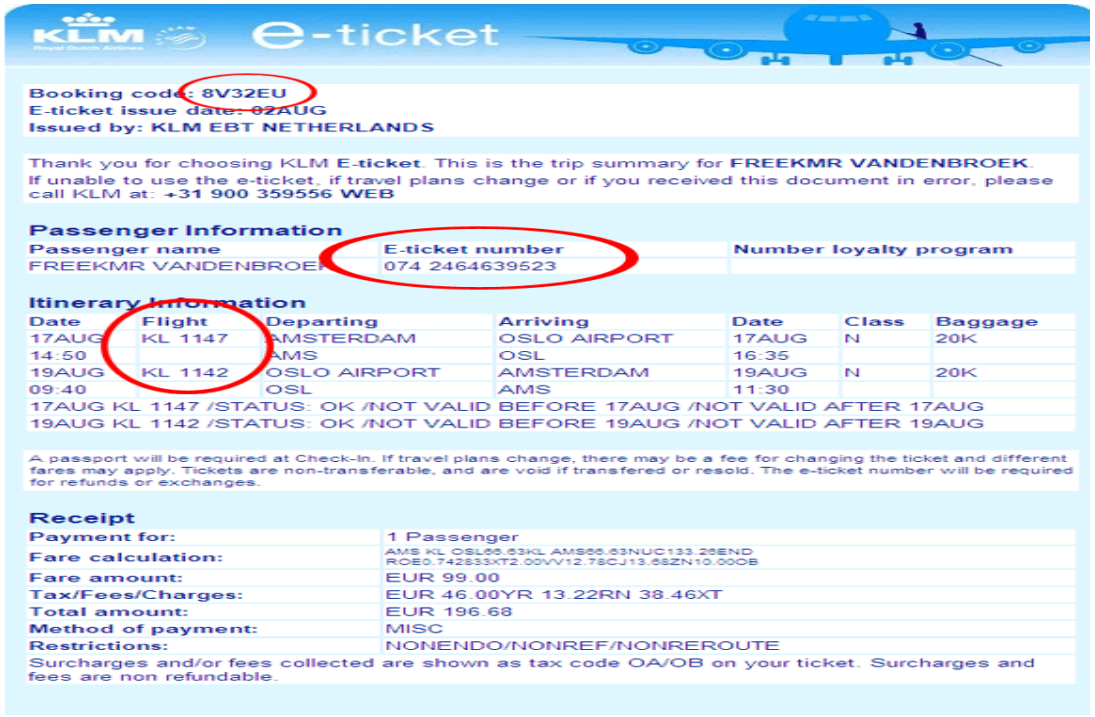
Day	MONDAY	Da	1-May-2017	Time	11:0	
Stand	Surfac			Marking		Remarkes
	Cracks	Groves		A/C Typs		
23	OK	OK		OK		
24	OK	OK		REPAINT		
25	OK	OK				
26	OK	OK	O			
27	OK	OK	OK			AINT
28	OK	OK	OK			EPAINT
29	OK	OK	OK	OK		REPAINT
30	OK	OK	OK	OK		NO
31	OK	OK	OK	OK		OK
32	OK	OK	OK	C		EPAINT
33	OK	OK	OK			O
34	OK	OK	O			
35	OK	OK				
36	OK	OK		EPAIN		
37	OK	OK		REPAINT		
38	OK	OK		REPAINT		
39	OK	OK		REPAINT	REPAINT	REPA
40	OK	OK	C	REPAINT	REPAINT	OK
41	OK	OK	OI	REPAINT	REPAINT	OK
42	OK	OK	OK	REPAINT	NO	OK
PAS 1	OK	OK	OK	OK	REPAINT	REPAINT	REPAINT	REPAINT
PAS 2	OK	OK	OK	OK	OK	NO	REPAINT	REPAINT

RWY 05L | TWY 05L | CSM 1 | CSM 2 | Stand Lighting | RAMP 1 | RAMP 2 | RAMP 3 | DEVICE LIST | Obstacle | maintanance report

IATA New projects & Trends

- **Simplifying The Business (STB)**

E.passport



E.ticket

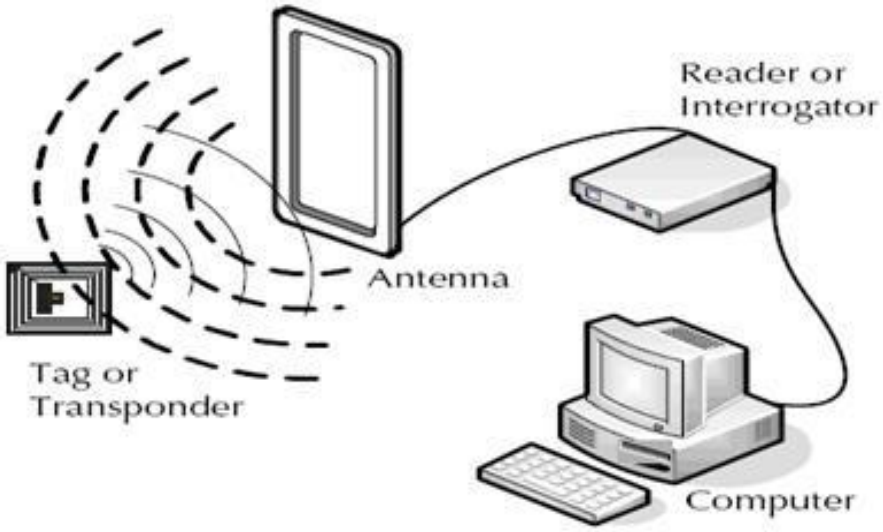
IATA New projects & Trends

* Fast travel (towards a seamless journey)

Mobile boarding pass

Electronic bag tag

E. freight



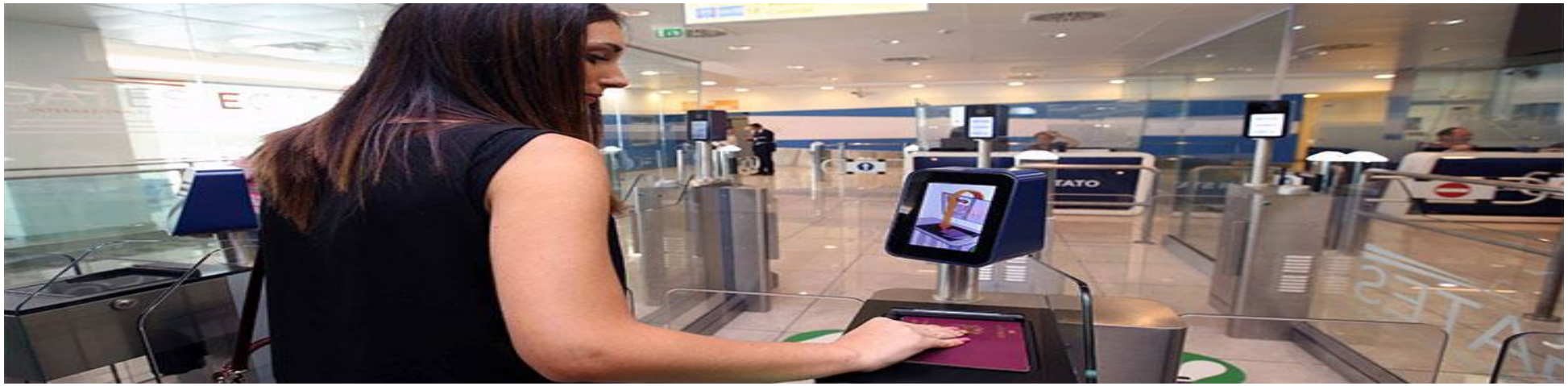
RFID

CUSS

IATA New projects & Trends

Check point of the future

ABC



BIG

Check point of the future

Elements of risk-based security

Passenger data, Information and intelligence

Alternative measures for unpredictability and deterrence

Known Traveler Programs

Behavior Observation

Identity Management

IATA New projects & Trends
Check point of the future

Pdxtk V1_WEB.m4v

Pdxtk V4_PNR_WEB.m4v

API

PNR

Any Questions ???

Good Luck

Aviation abbreviations & terminology

HECA / CAI
AERODROME
LANDSIDE
CURBSIDE
AIRSIDE
GSC: ground service control
ATC: Air Traffic control
ACT: apron control tower
TOC: terminal operation center
CIC: coordination & Info. center FOLLOW ME Airline Affairs
Exclusive service
VIP/CIP
EOC / Crisis Center
LIAISON OFFICE

TRANSFER
TRANSIT
BRS: baggage reconciliation system
BHS: baggage handling system
CONVEYOR BELT
CHECK IN
IMMIGRATION
PASSPORT CONTROL
PAX SCREENING
BOARDING GATE ELEVATOR/ESCALATOR/ TRAVELATOR
ATB
BTB
OCR
Barcoded
Magnetic

ACFT: aircraft
FIDS: flight info. Display system
FLT. Status: flight status
PAGING: manual calling
DLY: delay message
CNL: cancellation message
CHG: change message
ETA: estimated time of arrival
ETD: estimated time departure
ATA: Actual time of arrival
ATD: actual time of departure
STA: scheduled Time of arrival
STD: scheduled Time of departure **NOTAM**: notice to airmen
METAR: meteorology report
ARMS: **airport resources management system**
Height – altitude - elevation
DCS: departure control system

CUTE: common use terminal equipment
AFTN: aeronautical fixed telecom. network
ISMS: integrated security management system.
VDGS: visual docking guidance system.
AIRVUE:
PAS: public announcement system
PMS: parking management system
Info Broker: master mind
Scheduled / Charter
Private / Military
Tractor
Dispatcher
Fuel pit
Manhole
Velocity
ATS
SAR
Customs query

Carrier/ Airlines
Stand
DESTINATION
ORIGIN
ON/OFF BLOCKS
PUSH BACK
TAXILANE
TAXIWAY
RUNWAY
HOLDING POINT
PILOT
CO-PILOT
CABIN CREW
CDC
CABIN ATTENDANT
GALLEY
TICKETING
TERMINAL
HALL
BAG TAG

BOARDING PASS
CUSTOMS
MEETERS
GREETERS
QUARANTINE
CUSS KIOSK
INFO. KIOSK
LOST & FOUND
RVR
FIR
VOR
BACKTRACK
FIC
Bird Strike
Code
Type
Sub-type
Nose In
Nose out
Auto reverse

Disabled aircraft
Deportees
Trespassers
Inadmissible persons
Grid map
Bomb threat
Hi jack
MTOW
CAN / PCN
PNL
Sterile area
Hanger
Military base
Fuel farm
Procedures
De-icing
Non-coordinated APT
Schedules facilitated APT
Coordinated APT

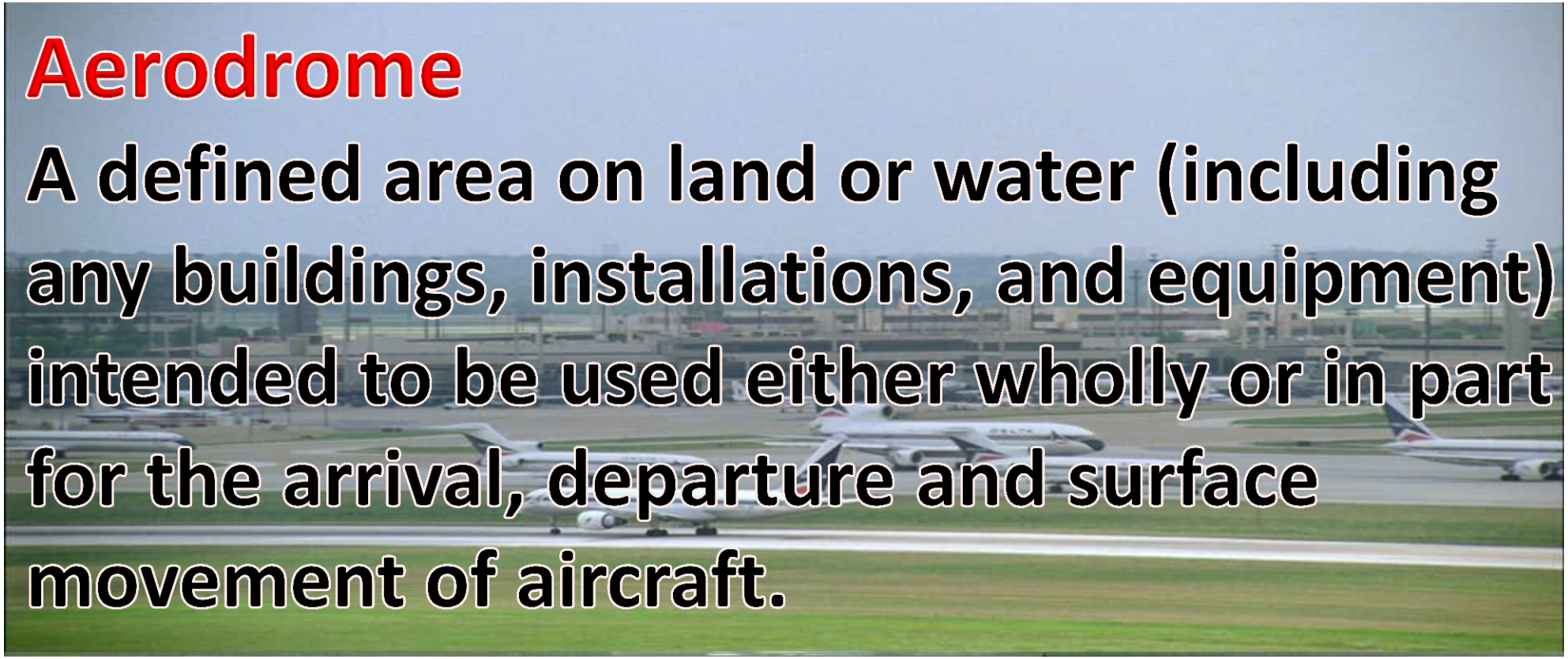
Tarmac
Roger
Affirmative
May day
Approved
Disregard
Request
Advise
Clear for
Abandon take off
Overshoot
Missed approach
Holding position
Standard taxi route
Establish
Airborne
Report
Read back
RCF
Contact

ADP Airside driving permit
AIP Aeronautical Information Publication
ATC Air traffic control
SARPs Standards and Recommended Practices
SMS Safety management system
UHF Ultra-high frequency
VHF Very high frequency
PRM person with reduced mobility
Release of goods
Relief flights
Removal of a person
Removal order
Temporary admission
Unaccompanied baggage
Unattended bag
Unclaimed baggage
Lading / unlading of cargo
Disinfection of aircraft
Disinsection of aircraft

Airside Physical Characteristics

Airside Physical characteristics:

- Runways
- Taxiways
- Service Roads
- Stands & Bridges
- Aircraft Hangers
- Cargo Village


Aerodrome
A defined area on land or water (including any buildings, installations, and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

Aerodrome Reference Code.

It Consists of two elements: (Aerodrome Reference field & length and Wing Span) as the following :

A - Aerodrome reference field length:

1 less than 800 M
2 800 M up to but not including 1200M
3 1200 M up to but not including 1800 M
4 1800 M and over

B - Wing Span element

Class : A, B, C, D, E & F

Apron.

A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.

Types of aprons:

- Passenger terminal apron
- Cargo terminal apron
- Remote parking apron
- Service and hangar aprons
- General aviation aprons

Size of aprons

The total apron area shall be adequate to permit expeditious handling of the aerodrome traffic at its maximum anticipated density.

Aircraft & Stand classes:

Class A	wing span up to not including 15M
Class B	wing span 15M up to not including 24M
Class C	wing span 24M up to not including 36M
Class D	wing span 36M up to not including 52M
Class E	wing span 52M up to not including 65M
Class F	wing span 65M up to not including 80M

Stands clearance distance:

An aircraft stand should provide the following minimum clearances between aircraft using the stand as well as between aircraft and adjacent buildings or other fixed objects.

Clearance (m)	*Code letter*
3.0	A
3.0	B
4.5	C
7.5	D
7.5	E
7.5	F

Collection of Aircraft dimension :

Table 3-1. Selected aircraft dimensions

Aircraft type	Length (m)	Wing span (m)	Nose wheel angle	Turning radius (m)
A300B-B2	46.70	44.80	50°	38.80[a]
A320-200	37.57	33.91	70°	21.91[c]
A330/A340-200	59.42	60.30	65°	45.00[a]
A330/A340-300	63.69	60.30	65°	45.60[a]
B727-200	46.68	32.92	75°	25.00[c]
B737-200	30.58	28.35	70°	18.70[a]
B737-400	36.40	28.89	70°	21.50[c]
B737-900	41.91	34.32	70°	24.70[c]
B747	70.40	59.64	60°	50.90[a]
B747-400	70.67	64.90	60°	53.10[a]
B757-200	47.32	37.95	60°	30.00[a]
B767-200	48.51	47.63	60°	36.00[a]
B767-400 ER	51.92	61.37	60°	42.06[a]
B777-200	63.73	60.93	64°	44.20[a]
B777-300	73.86	73.08	64°	46.80[a]
BAC 111-400	28.50	27.00	65°	21.30[a]
DC8-61/63	57.12	43.41/45.2	70°	32.70[c]
DC9-30	36.36	28.44	75°	20.40[c]
DC9-40	38.28	28.44	75°	21.40[c]
DC9-50	40.72	28.45	75°	22.50[c]
MD82	45.02	32.85	75°	25.10[b]
MD90-30	46.50	32.87	75°	26.60[b]
DC10-10	55.55	47.35	65°	35.60[a]
DC10-30	55.35	50.39	65°	37.30[a]
DC10-40	55.54	50.39	65°	36.00[a]
MD11	61.60	52.50	65°	39.40[a]
L1011	54.15	47.34	60°	35.59[a]

Runway

A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.


04
F.Bocquet www.photos-aeriennes.net Tel 03 20 87 87 59
F Bocquet

RUNWAY SHOULDERS

Runway shoulders must be provided to ensure a transition from the full strength pavement to the unpaved strip of the runway.

The paved shoulders protect the edge of the runway pavement, contribute to the prevention of soil erosion by jet blast and mitigate foreign object damage to jet engines.

Runway shoulders should be provided for a runway where the code letter is D or E, and the runway width is less than 60 m. Runway shoulders should be provided where the code letter is F.

RUNWAY STRIPS

A runway strip extends laterally to a specified distance from the runway centre line, longitudinally before the threshold, and beyond the runway end.

It provides an area clear of objects which may endanger airplanes. The strip includes a graded portion which should be so prepared as to not cause the collapse of the nose gear if an aircraft should leave the runway.

There are certain limitations on the slopes permissible on the graded portion of the strip.

Runway Strip Length

A strip should extend before the threshold and beyond the end of the runway or stopway for a distance of at least 60 m where the code number is 2, 3 or 4

Runway Strip Width

A strip including a precision approach runway shall, wherever practicable, extend laterally for a distance of at least 150 m where the code number is 3 or 4

Taxiway

A defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including :

a) Aircraft stand taxilane.

b) Apron taxiway.

c) Rapid exit taxiway.

Width of taxiways

23 m Code E

25 m Code F

Taxiway shoulders

The overall width of the taxiway and its shoulders on straight portions is not less than :

60 m where the code letter is F;
44 m where the code letter is E;

Taxiway minimum separation distances
Taxilane minimum separation distances
Table 3-1 annex 14

Maneuvering Area

That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.

Movement Area

That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the maneuvering area and the apron(s).

Aircraft Stand Allocation


Contact Stand
B1


Remote Stand

Aircraft stand allocation elements

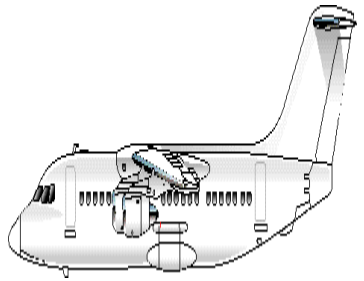
- Flight type : (Commercial, cargo, hijacked, business, military , emergency …etc.)
- Number of passenger (pax no.)
- Origin / destination

continued

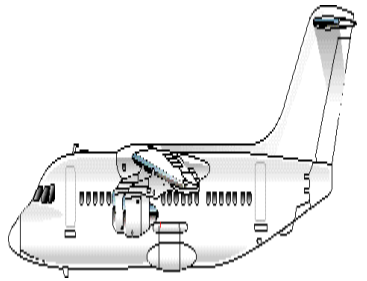
- Arrival hall (in case of remote stand)
- Flight type : Pax / VIP / Business / Military / Cargo …etc.
- Ceremonial flights

Any questions ?

Airport Terminal Management



Airports are the first / last image of a country. The passengers coming to the Country or leaving it will get an image of the Country from the Terminal Building and its surroundings (Furniture, Cleanliness, Facilities and all comfort of the terminal building atmosphere).



The places connected to the terminal from inside and outside should be of specified standard and clean, (the aerobridges, linking passes, check-in areas, immigration areas, halls, meeters and greeters areas, curbside) are very important and effective on the passengers judgment on the airport and the whole country.

Services to be provided are cleaning, comfort and giving the passenger a feeling of satisfaction.

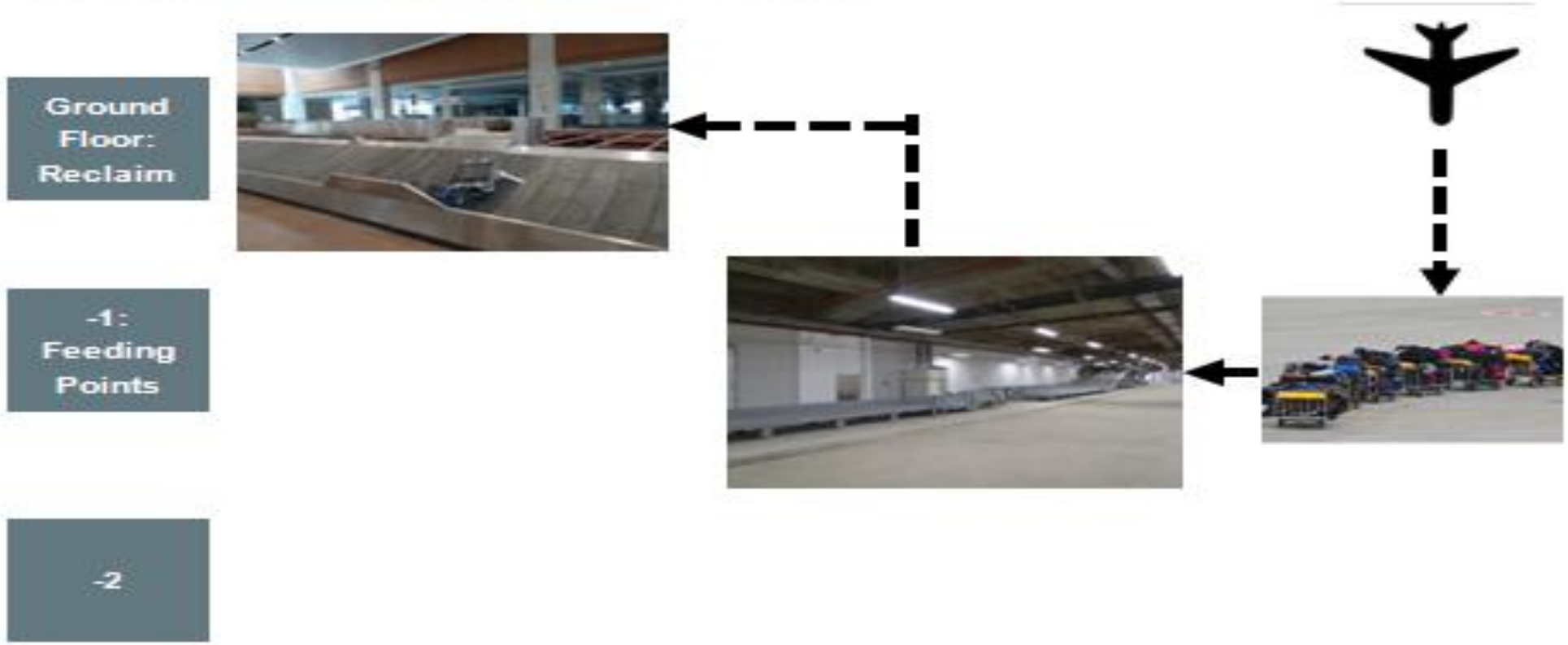
The cleanliness, green plants and smooth traffic inside the terminal building and the streets leading to the airport are very important to make the passenger satisfied and feeling comfortable.

The terminal building should be inspected daily (areas, furniture, equipment ….etc.) to take the remarks about any defect and take action to fix it as soon as possible or put the plan for maintenance.

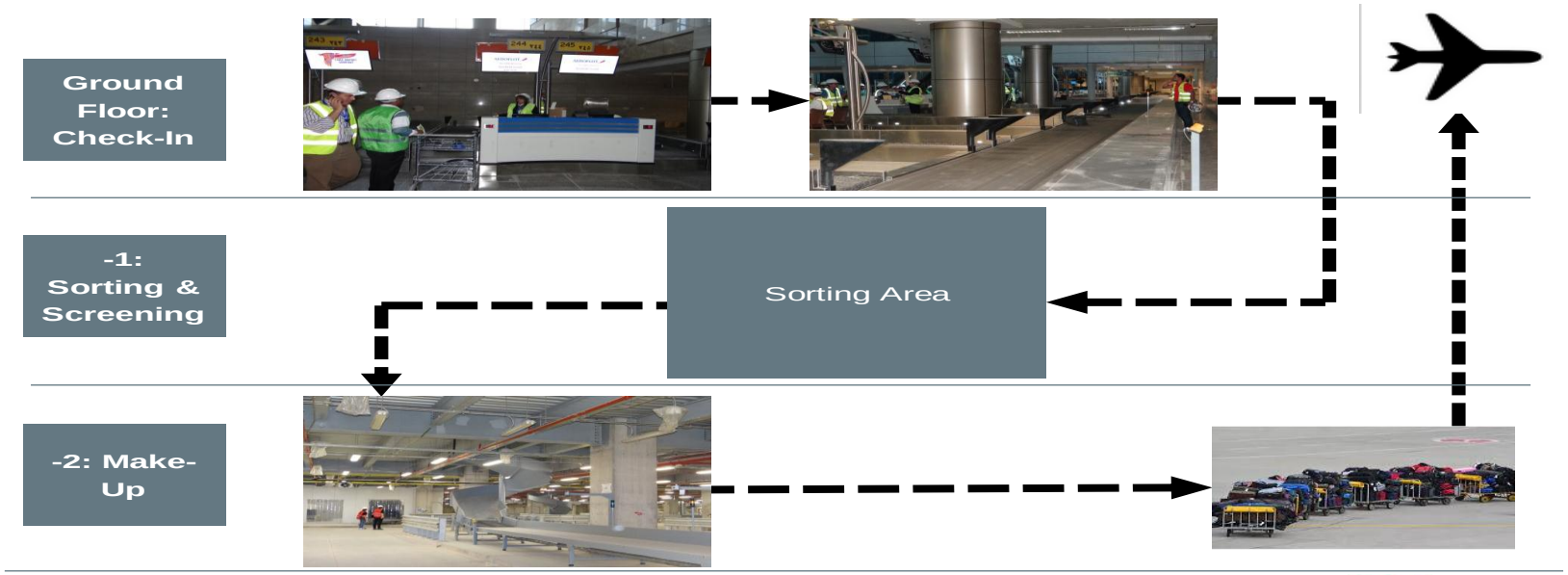
The passengers need to finalize the arrival procedures as quickly as possible, especially who are coming through long distance flights.

The airport & terminal management should establish as a goal the clearance within 45 minutes of disembarkation from the aircraft of all passengers requiring, regardless of aircraft size and scheduled arrival time. **Due to ICAO annex (9) recommendation.**

Way of Arriving Lugagge: In Gauge



Way of Departing Lugagge: In Gauge



Achieving of these recommendations requires upgrading the potentials of buildings by supplying the terminal with new technology that facilitates the finalizing of passenger procedures efficiently and quickly.

Generally, Airports Terminal Management is supposed to ensure smooth and effective procedures and Operation of the Terminal.

Airport Service Quality Management

Service Quality Management SQM plays an important role to develop and increase the competitive chance of the airport in its region and among all international airports.

In order to ensure the smooth and effective procedures and Operation of Terminal QSM sets quality goals, For example :

- Set performance standards for courtesy and welcoming.
- Passenger feed back as a source of Service Measurement.

- Monitor Positive and Negative feed back.
- International / Domestic Survey Reports .

SQM works through these keys :

a. Controlling the Quality.

b. Improving the Quality i.e.,
Commitment by Top Management .

c. Quality Service Programs :

- Training and Development .
- Awards and Incentives .
- Continuous Learning .

CUSTOMER SERVICE MANAGEMENT & INFORMATION

Customer service management is one of the most essential components of the terminal operation & management.

Terminal Management Discipline has to look after the Customer Service Management in addition to their day to day responsibility of terminal operation.

CONCEPT OF AIRPORT QUALITY POLICY

- Safety
- Quality
- Service
- Team-work
- Continuous learning of civil aviation and airport operations.

ROLES OF CUSTOMER SERVICE UNIT

- Set Customer Service Standards
- Manage Airports Authority Customer Service Operation
- Monitor Customer Feed Back on Service Standard
- Manage Inter-Agency Quality Service Management Program

ROLES OF CUSTOMER SERVICE OFFICER & DUTY TERMINAL MANAGER

- To attend to Passengers “Enquiries”
- To provide Passengers “Assistance”
- To make Flights and Public Announcement at the airport where the exigency of the situations so demands.

BASIC CUSTOMER SERVICE PROCESSES

- Phone Enquiries
- Medical Emergencies
- Lost & Found Properties
- Provide Unattended Luggage Facilities

INFORMATION :

- Signage (allocation, size, illuminated, shape)
- Audio/video Information .
- Flights information Display **FIDS**
- Closed Circuits TV. **CCTV**

FACILITATION :

- Information counter.
- Public suggestions and complaints boxes.
- Lost & Found service.
- Unattended Luggage

continued

FACILITATION :

- Conveyor Belts
- Air Insurance Counter
- Wall mounted Clock (Digital)
- Seating Arrangement
- Water dispenser

continue

FACILITATION :

- Toilets
- Entertainment (TV)
- Golf Car
- Child Care Facility
- Kids corner

TOP VIP / VIP MOVEMENTS

Due to security reasons, VIPs pass from special rout away from passengers , in both land & airside areas, they also take a special vehicle up to the Aircraft and exempted from Pre-embarkation Security Check.

Airport Terminal Manager shall be responsible for ensuring smooth handling of VIPs .

Special care should be taken by the officer on duty to ensure that the correct ETA & ETD and follow up with ATC. Such information should be passed on to the officials attending the VIP in time & necessary assistance should be provided at all times.

REQUIREMENTS FOR VIP FACILITATION :
SEPARATED & SECURED AREA
COMPRISING OF:

- LOUNGE
- CEREMONIAL AREA
- REFRESHMENT FACILITY
- SEPARATE LANDSIDE ACCESS
- SEPARATE AIRSIDE ACCESS
- CAR PARK
- PRESS FACILITY

TERMINAL CONTINGENCY PLANS AND STANDARD OPERATING PROCEDURES (SOP) - EMERGENCY SITUATIONS

Airport Authority has to set a contingency plan and SOPs to handle the emergency cases in a smooth manner without hampering the airport operation.

WHAT IS CONTINGENCY Plan ?

WHAT IS STANDARD OPERATING PROCEDURES (SOPs)?

Standard Operating Procedures are the written instructions indicating clearly the step by step actions to be taken by the Staff when discharging their responsibilities in the event of :

- Normal Operation.
- Abnormal Operation
- Aircraft Emergencies
- Airport Emergencies
- Failure of critical Services / Facilities

What is the Purpose of SOPs ?

- To ensure quick response in the event of situations mentioned above .
- To ensure Consistency (coordination)in the action needed .
- Facilitate upgrading of procedures from time to time .
- Promote Staff awareness of various processes Could be used as a Training Tool .

Terminal Apron Concepts :

- Aircraft gates and parking positions
- Aircraft gate wingtip clearances
- Aircraft parking guidance systems
- Blast fences
- Apron service roads
- Aircraft servicing
- Ground service equipment storage
- Apron lighting

Terminal Building Concepts :

- Simplicity
- Minimize walking distances
- Easy of Way Finding .
- Facilitating Processes (e.g ATM)
- Minimize passengers intersected flows

continue

- Compatibility of facilities with aircraft characteristics
- Built-in flexibility to accommodate future changes in dynamic industry
- Traffic peaks characteristics.
- Transfer volume and connecting time.

Terminal Executive Manager (TEM)

Terminal Executive Manager lead the team work of the terminal management, so he is the first responsible person for implementing the items concerning the facilitation in the ICAO annexes and documents, especially which mentioned in annex (9).

Terminal Manager has to Coordinate & Cooperate with the Protocol Staff and other Liaison Officers to facilitate VIPs procedures when information is received. Terminal Manager has also to Coordinate with Airlines & Airport Security Staff in view of extending Courtesies to VIP's / Passengers / Visitors and also for smooth procedures of Terminal Management.

Terminal Manager has also to Coordinate in general with all the entities working at the airports for Customer Satisfaction.

TEM responsibilities :

- Puts the plans to upgrade the employees performance level.
- He is the link between the top management and the department under his management.
- He is responsible for implementing the facilitating procedures provided in ICAO annex (9) … for example,

Contracting States, with the cooperation of airport operators, shall use applicable technology and adopt a multi-channel immigration inspection system, or other means of streaming passengers, at international airports where the volume of passenger traffic justifies such Measures.

- Coordinates with the official entities (Immigration, Ministry of Foreign Affairs, Ministry of Health, National Security …. etc.
- Coordinates with airlines to upgrade the service level, as well to comply with the airlines according to the operational instructions of the airport.
- Follows-up Inspection Reports by top management.
- Inspects the terminal work aspects through several touring by himself and by his assistants to assure smooth performance and solve the problems.

- Facilitation matters i.e. Monitoring & Follow-up on matters at airports related to Flight Information System, Announcement System, cleaning performance level…. Etc.
- Holds circular meetings with assistance, department manager to follow up, solve and discuss the terminal concerns.
- Coordinates with Civil Aviation Authorities.

- Issuances of Circulars / Instructions related to Terminal Management.
- Co-ordinates and co-operates with Commercial entities to establish and enhance the Commercial activities to collect Non-aeronautical Revenue at Terminal.

Duty Manager :

Duty Terminal Manager must be capable of handling all kinds of situations that may occur during his shift and must inform his General Manager well in time for correction action .

- Supervising and monitoring the coordinators.
- Solving problems facing passengers if coordinators are not able to provide the solution.
- Coordination with airlines to achieve passengers procedures through procedures approved by TEM.
- Cooperating with all passengers / airlines / agencies.

- Coordination with official authorities (immigration, customs, airport police) especially in case of VIPs movements.
- Implementing the facilitation procedures .

- Implementing and carrying out the tasks and follow the TEM instructions and the management circular instructions.
- Inspect the readiness of VIP lounges and exclusive lounges .

Coordinators :

- Reporting of passenger congestion inside / outside the terminal.
- Ensuring the presence of the security representative and the representative of passenger services, civil defense and quarantine.
- Report technical failures to speed up repair.

- Following up the cleaning works
- Monitoring the performance of the employees of the information and duty free shops in their dealing with the passengers.
- Monitor the regularity of the immigration process.

- Monitoring best use of the terminal tools and devices from the passengers and employees.
- Submit a report on the events during the shift.

Any Questions

Managing Airline Operators & Ground Handlers

Cairo Airport serves many airlines and aviation agencies through various airport administrations, each in its own work subject.

Therefore, we can determine the nature of the relationship between the airport and airlines and their agents by studying the nature of their dealing with the various departments at the airport.

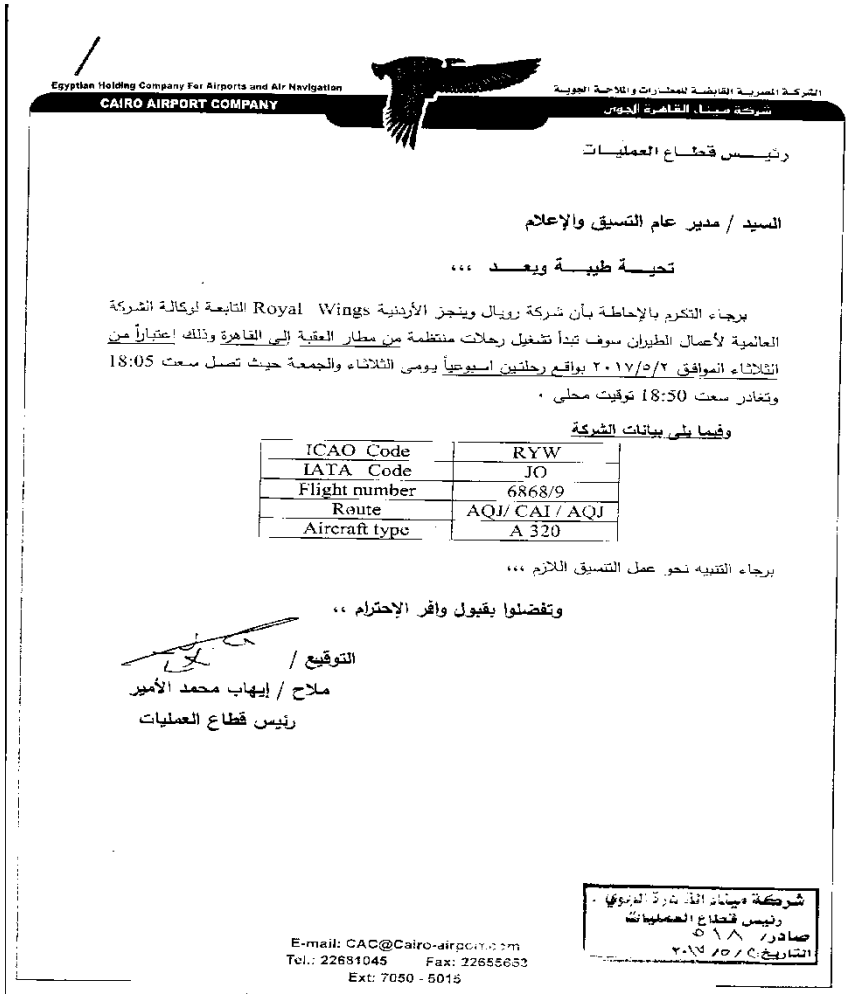
General Administration of aeronautical fees (Liaison office)

- Initial approval of flight plans
- Departure fees collection
- Calculation and collection of :
    - Aeronautical fees
    - Airside services fees
    - Land side services fees

CIC & TOC

- Approaching the airlines before the operating season (summer-winter) to send flight schedules and a copy of Civil Aviation Authority approval.
- Granting preliminary approval to receive non-scheduled flights
- Preparation of Flights information tables.

Continue



Egyptian Holding Company For Airports and Air Navigation
CAIRO AIRPORT COMPANY

الشركة المصرية القابضة للمطارات والملاحة الجوية
شركة مطار القاهرة الدولي

رئيـــس قطـــاع العمليـــات

السيد / مدير عام التنسيق والإعلام

تحيـــة طيبـــة وبعـــد ،،،

برجاء التكرم بالإحاطة بأن شركة رويال وينجز الأردنية Royal Wings التابعة لوكالة الشركة العالمية لأعمال الطيران سوف تبدأ تشغيل رحلات منتظمة من مطار العقبة إلى القاهرة وذلك اعتباراً من الثلاثاء الموافق ٢٠١٧/٥/٢ بواقع رحلتين اسبوعياً يومى الثلاثاء والجمعة حيث تصل سعت 18:05 وتغادر سعت 18:50 توقيت محلى .

وفيما يلى بيانات الشركة

ICAO Code	RYW
IATA Code	JO
Flight number	6868/9
Route	AQJ/ CAI / AQJ
Aircraft type	A 320

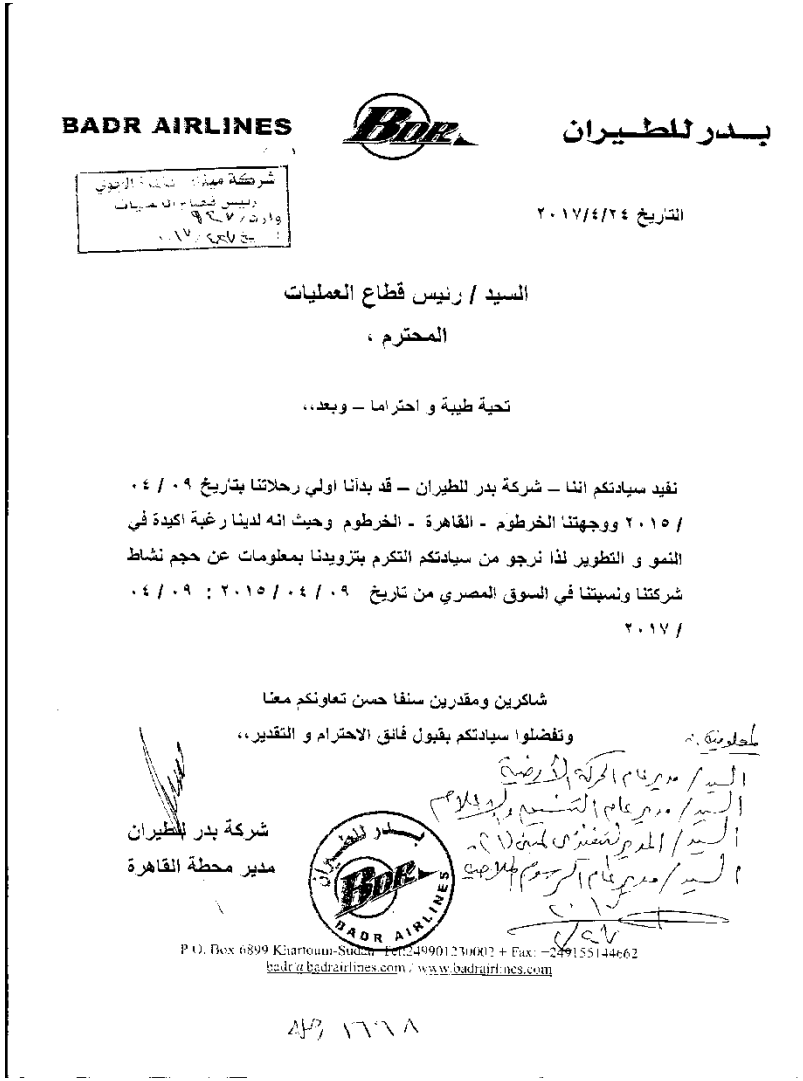
برجاء التنبيه نحو عمل التنسيق اللازم ،،،

وتفضلوا بقبول وافر الإحترام ،،

التوقيع /
ملاح / إيهاب محمد الأمير
رئيس قطاع العمليات

شركة ميناء القاهرة الدولي
رئيس قطاع العمليات
صادر/ ٥١٨
التاريخ: ٢٠١٧/٥/٠

E-mail: CAC@Cairo-airport.com
Tel.: 22681045 Fax: 22655653
Ext: 7050 - 5015



BADR AIRLINES

بـــدر للطـــيران

التاريخ ٢٠١٧/٤/٢٤

السيد / رئيس قطاع العمليات

المحترم ،

تحية طيبة و احتراما – وبعد،،

نفيد سيادتكم اننا – شركة بدر للطيران – قد بدأنا اولي رحلاتنا بتاريخ ٠٩ / ٠٤ / ٢٠١٥ ووجهتنا الخرطوم - القاهرة - الخرطوم وحيث انه لدينا رغبة اكيدة في النمو و التطوير لذا نرجو من سيادتكم التكرم بتزويدنا بمعلومات عن حجم نشاط شركتنا ونسبتنا في السوق المصري من تاريخ ٠٩ / ٠٤ / ٢٠١٥ : ٠٩ / ٠٤ / ٢٠١٧

شاكرين ومقدرين سلفا حسن تعاونكم معنا

وتفضلوا سيادتكم بقبول فائق الاحترام و التقدير،،

شركة بدر للطيران
مدير محطة القاهرة

P.O. Box 6899 Khartoum-Sudan - Tel:2499012300002 + Fax: -2491551144662
badr@badrairlines.com / www.badrairlines.com

- Allocation of counters
- Allocation of Gates
- Allocation of the reclaim belts.

Ground Service Control (ACT) :

- Aircraft stand allocation
- Coordination with the airlines in normal and upnormal and emergency flights.

السيد / مدير عام الحركة الأرضية

تحيـــة طيبـــة وبعـــد ،،،

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التوقيع /
ملاح / إيهاب محمد الأمير
رئيس قطاع العمليات

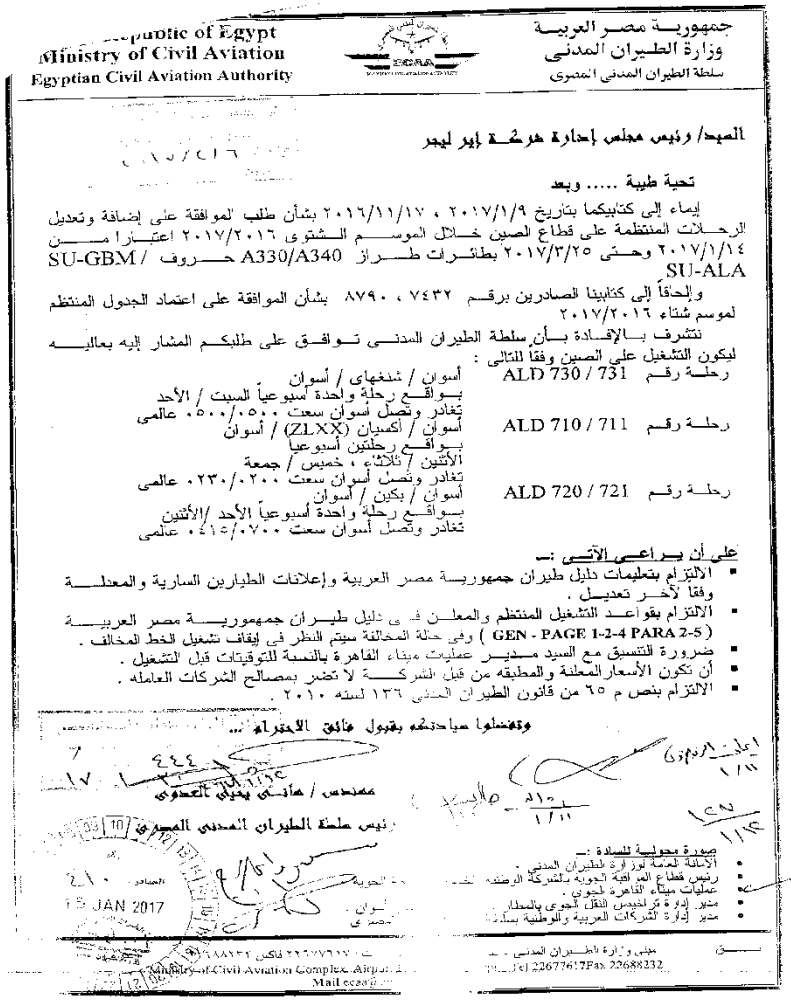
شركة ميناء القاهرة الجوي
رئيس قطاع العمليات
صادر ٥١٦٩
التاريخ: ٢٠١٧/٥/٢

Follow Me

- Issuing a work order for the pushback and other services provided to the airlines.
- Issuing any violations of the airlines equipment and employees.

Governmental Agencies & Official Authorities

- Civil Aviation Authority
- Military Facilitations
- Official Ceremony affairs
- Ministry Council
- Presidential Affairs
- National Security
- National Intelligence
- Military Intelligence
- Quarantine



Republic of Egypt
Ministry of Civil Aviation
Egyptian Civil Aviation Authority

جمهورية مصر العربية
وزارة الطيران المدنى
سلطة الطيران المدنى المصرى

السيد/ رئيس مجلس إدارة شركة إير ليجر

تحية طيبة ..... وبعد

إيماء إلى كتابيكما بتاريخ ٢٠١٧/١/٩ ، ٢٠١٦/١١/١٧ بشأن طلب الموافقة على إضافة وتعديل الرحلات المنتظمة على قطاع الصين خلال الموسم الشتوى ٢٠١٧/٢٠١٦ اعتبارا من ٢٠١٧/١/١٤ وحتى ٢٠١٧/٣/٢٥ بطائرات طراز A330/A340 حروف / SU-GBM SU-ALA

وإلحاقاً إلى كتابينا الصادرين برقم ٧٤٣٢ ، ٨٧٩٠ بشأن الموافقة على اعتماد الجدول المنتظم لموسم شتاء ٢٠١٧/٢٠١٦

نتشرف بالإفادة بأن سلطة الطيران المدنى توافق على طلبكم المشار إليه بعاليه ليكون التشغيل على الصين وفقا للتالى :

رحلة رقم ALD 730 / 731
أسوان / شنغهاى / أسوان
بواقع رحلة واحدة أسبوعياً السبت / الأحد
تغادر وتصل أسوان سعت ٠٥٠٠/٠٥٠٠ عالمى

رحلة رقم ALD 710 / 711
أسوان / أكسيان (ZLXX) / أسوان
بواقع رحلتين أسبوعيا
الأثنين / ثلاثاء ، خميس / جمعة
تغادر وتصل أسوان سعت ٠٢٠٠/٠٢٣٠ عالمى

رحلة رقم ALD 720 / 721
أسوان / بكين / أسوان
بواقع رحلة واحدة أسبوعياً الأحد /الأثنين
تغادر وتصل أسوان سعت ٠٧٠٠/٠٤١٥ عالمى

على أن يراعى الآتى :-

- الالتزام بتعليمات دليل طيران جمهورية مصر العربية وإعلانات الطيارين السارية والمعدلة وفقاً لآخر تعديل .
- الالتزام بقواعد التشغيل المنتظم والمعلن فى دليل طيران جمهورية مصر العربية (GEN - PAGE I-2-4 PARA 2-5) وفى حالة المخالفة سيتم النظر فى إيقاف تشغيل الخط المخالف .
- ضرورة التنسيق مع السيد مدير عمليات ميناء القاهرة بالنسبة للتوقيتات قبل التشغيل .
- أن تكون الأسعار المعلنة والمطبقه من قبل الشركة لا تضر بمصالح الشركات العامله .
- الالتزام بنص م ٦٥ من قانون الطيران المدنى ١٣٦ لسنه ٢٠١٠ .

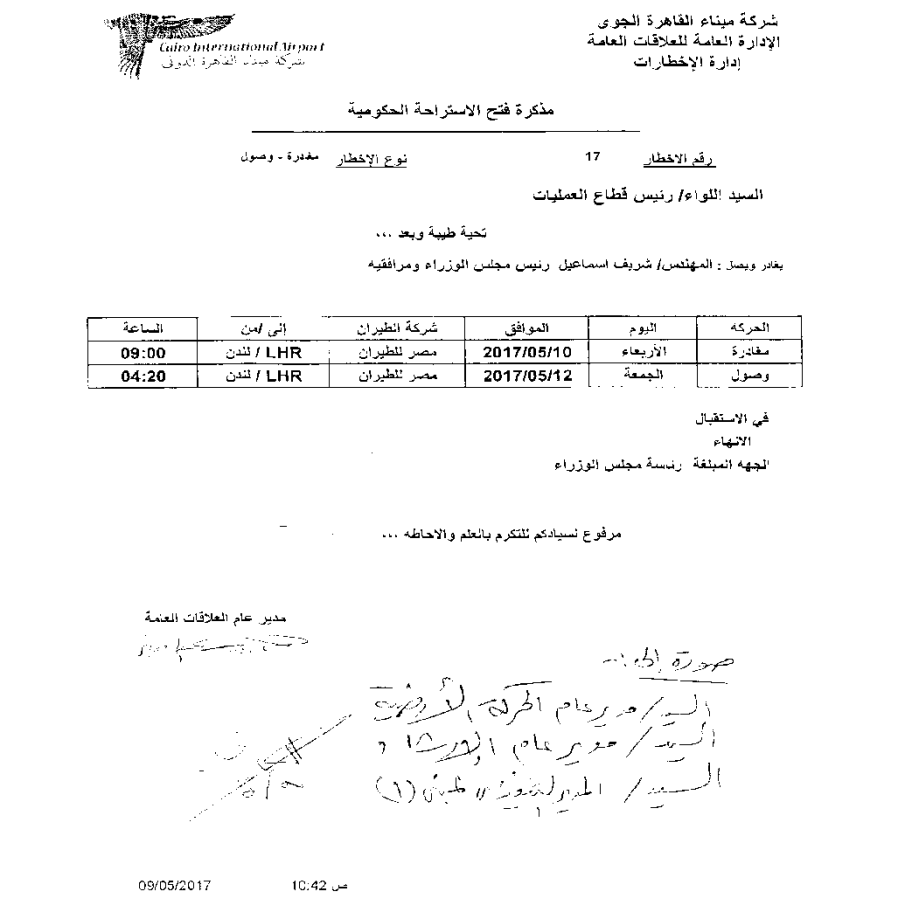
وتفضلوا سيادتكم بقبول فائق الاحترام ...

مصدس / هانى يحيى العدوى
رئيس سلطة الطيران المدنى المصرى

15 JAN 2017

صورة محولة للسادة :-
- الأمانة العامة لوزارة الطيران المدنى .
- رئيس قطاع الملاحة الجوية بالشركة الوطنية .
- عمليات ميناء القاهرة الدولى .
- مدير إدارة تراخيص النقل الجوى بالمطار .
- مدير إدارة الشركات العربية والوطنية بمطار

Ministry of Civil Aviation Complex, Airport
Mail ecaa



شركة ميناء القاهرة الجوى
الإدارة العامة للعلاقات العامة
إدارة الإخطارات

Cairo International Airport
شركة ميناء القاهرة الدولى

مذكرة فتح الاستراحة الحكومية

رقم الاخطار 17 نوع الإخطار مغادرة - وصول

السيد اللواء/ رئيس قطاع العمليات

تحية طيبة وبعد ...

يغادر ويصل : المهندس/ شريف اسماعيل رئيس مجلس الوزراء ومرافقيه

الحركه	اليوم	الموافق	شركة الطيران	إلى /من	الساعة
مغادرة	الأربعاء	2017/05/10	مصر للطيران	LHR / لندن	09:00
وصول	الجمعة	2017/05/12	مصر للطيران	LHR / لندن	04:20

في الاستقبال
الانتهاء
الجهه المبلغة رئسة مجلس الوزراء

مرفوع لسيادكم للتكرم بالعلم والاحاطه ...

مدير عام العلاقات العامة

صورة إلى :-
السيد/ مدير عام الحركة الأسبق
السيد/ مدير عام البوابة ٢
السيد/ المدير التنفيذي طيبن (١)

09/05/2017 ص 10:42

Any Questions ?

- ✓Airport Performance Indicators.
- ✓Principles of Airline Flight Operation Safety.
- ✓Airline Delays Affected Terminal Operations.
- ✓Aerodrome Emergency Plans AEP.

Airport Performance Indicators

Airport Performance indicators

- KPI's can be defined as "KPIs represent a set of measures focusing on those aspects of organizational performance that are the most critical for the current and future success of the organization."

- KPI's are measures – quantitative or qualitative – and may have different structure and units.

Airport Performance indicators

The increase in demand for air transportation during the years has resulted in larger, more complex airports.

The large airports today constitute important industries for:

- The countries where they are located and
- The airlines and
- Other industries that depend on airport for their own operations

Airport Performance indicators

One key factor to succeed in making an airport reliable and efficient is performance measurement.

Without knowing the current performance of the airport, it is difficult to discern which areas that could be improved

Airport Performance indicators

- Key Performance Indicators (KPI) can be used.
- KPI's are a set of simple measures.
- Spanning the most critical parts of the operations.
- Giving indications on the current performance.
- They do not provide a detailed analysis, or directly suggest how to improve the airport.
- But can be used as pointers, **showing where more work has to be performed.**

Airport Performance indicators

- The airport is divided into different activity areas, and Airport KPI's are developed for each of them.
- The number of performance indicators for any system should not be too large

- for each activity area, many indicators are developed.
- initial set of indicators – are selected based on previous research.

Airport Performance indicators

- a questionnaire based survey study may performed.
- collecting information from airport managers.
- Based on the results from the survey, a final set of indicators are selected.

Airport Performance indicators

Sometimes, these measures do not say anything by themselves, but have to be compared to historical data or to equivalent measures for other airports (benchmarking) i.e. studying other airports, trying to identify and incorporate best practices

Airport Performance indicators

- As the airport business has become more commercialized over the years, the need for business Oriented performance measures has increased

- Income per passenger,
- Check-in waiting time and
- Number of breaches of the noise limit,
- the work load unit (WLU), which is one passenger processed or 100 kg of freight handled. Examples include Total cost per WLU and Total revenue per WLU

Airport Performance indicators

- "The future of performance measurement at airports is likely to be driven by the forces of commercial business focus"

- For the majority of the suggested indicators, the measure of success is the time until normal operations are resumed.

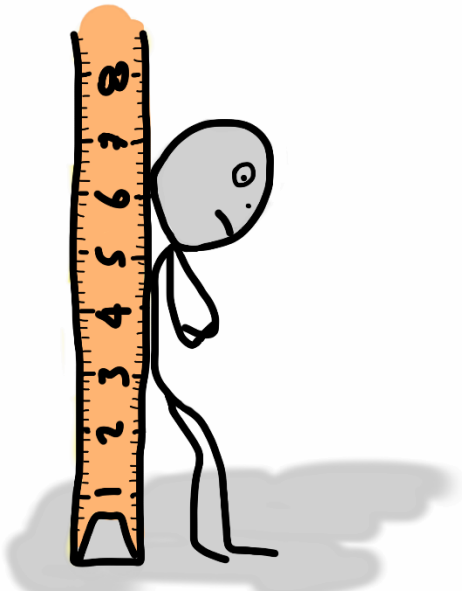
Airport Performance indicators

- When selecting indicators, it is important they should be:
  - Measurable.
  - Quantitative.
  - Can be easily compared to other airports/period.
  - Monitored over time.

- For an operational use, it may also be possible to set bounds threshold values for an indicator.

- IF the indicator value exceeds (or falls below) the threshold, an action might be necessary.

Airport Performance indicators



It is also important to consider the availability of data. An indicator is of no use, if it is not possible to find data to calculate the value.

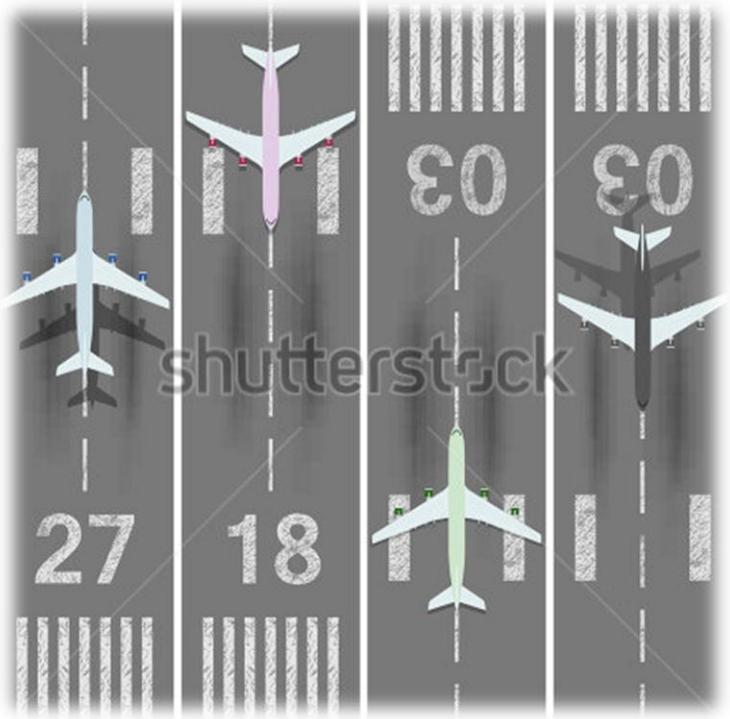
Airport Performance indicators

- Airports operate under very different circumstances in terms of aviation activities.
- For example, privatized airports are likely to focus on different financial PIs than non-profit government-owned airports.
- Larger airports are likely to focus on different PIs than smaller airports.
- Airports with large developable land areas are likely to focus on different PIs than tightly constrained airports in large urban areas.

Airport Performance indicators

Setting Different Pis For different operational areas :

Operations Airport:



1. Turnaround times in the apron/gate area
2. Arrival Inbound efficiency
3. Departure Outbound efficiency
4. Temporal distribution of demand by time-of-day
5. Total traffic in terms of aircraft movements
6. Runway occupancy times by type of aircraft
7. Taxiing times from runways to apron/gates and vice-versa
8. Baggage delivery time
9. Number of runways and taxiways simultaneously in use

Airport Performance indicators

Setting Different Pis For different operational areas :

Airport Economy:

1.Income per passenger
2.Traffic income per passenger
3.Non-aeronautical income per passenger
4.Staff cost per passenger
5.Revenue per expenditure ratio
6.Commercial income per square meter of floor space
7.Expenditure per passenger
8.Contribution per WLU

Airport Performance indicators

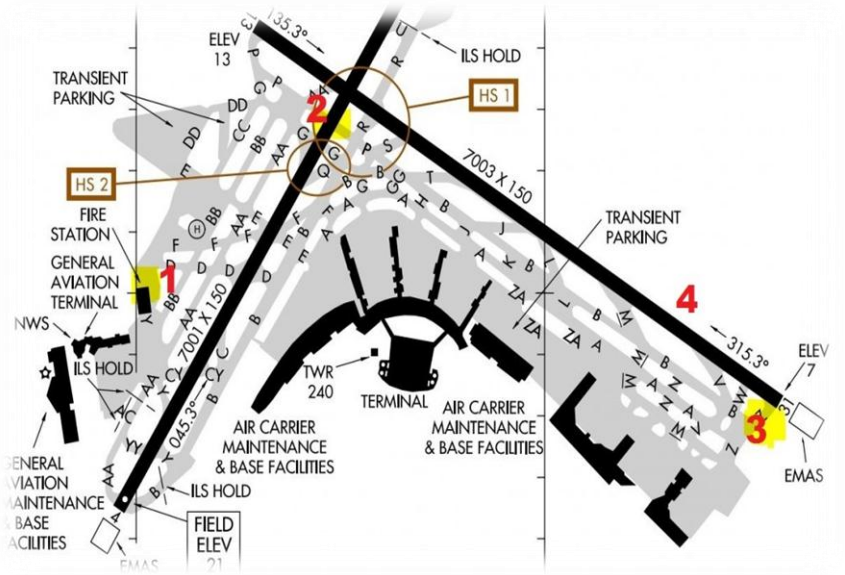
Setting Different Pis For different operational areas :

Airport Environmental Issues:

1.Energy consumption
2.Number of contamination events
3.Waste recycling (tons)
4.Area affected by aircraft noise
5.Number of breaches of noise limits
6.Share of journeys that use public transport

Airport Performance indicators

Setting Different Pis For different operational areas :



Airport Safety and Security:

1.Number of aircraft safety incidents
2.Number of incidents at security checkpoints
3.Time between shut-down and reopening in case of breach of security
4.Time it takes to business operations to begin in case of evacuation
5.Taken time and grade of destruction when returning to normality

Airport Performance indicators

Setting Different Pis For different operational areas :

Airport Customer Service:

1.Check-in waiting and processing times
2.Security control waiting and processing times
3.Amount and duration of delays
4.Quality of signage/ease to find the way
5.Baggage waiting time.

Airport Performance indicators

Example : ACI Guide to Airport Performance Measures

Core

1. Passengers
2. Origin and Destination Passengers
3. Aircraft Movements
4. Freight or Mail Loaded/Unloaded
5. Destinations—Nonstop

Core – these are the core measures used to characterize and categorize airports, such as the number of passengers and operations. Although airports may have little control over these core indicators, especially in the short term, they are important indicators of overall airport activity, and important drivers and components of other indicators.

Airport Performance indicators

Example : ACI Guide to Airport Performance Measures

Safety and Security

1. Runway Accidents
2. Runway Incursions
3. Bird Strikes
4. Public Injuries
5. Occupational Injuries
6. Lost Work Time from Employee Accidents and Injuries

Safety and Security – these are the most important airport responsibilities, and therefore they are categorized separately.

Airport Performance indicators

Example : ACI Guide to Airport Performance Measures

Service Quality

1. Practical Hourly Capacity
2. Gate Departure Delay
3. Taxi Departure Delay
4. Customer Satisfaction
5. Baggage Delivery Time
6. Security Clearing Time
7. Border Control Clearing Time
8. Check-in to Gate Time

Service Quality – this increasingly important area reflects the evolution of airport management from having a primary focus on facilities and operations to having a strong customer service focus in an increasingly competitive environment.

Airport Performance indicators

Example : ACI Guide to Airport Performance Measures

Productivity/Cost Effectiveness
1. Passengers per Employee
2. Aircraft Movements per Employee
3. Aircraft Movements per Gate
4. Total Cost per Passenger
5. Total Cost per Movement
6. Total Cost per WLU
7. Operating Cost per Passenger
8. Operating Cost per Movement
9. Operating Cost per WLU

Productivity/Efficiency – these measures are closely related/ overlapping measures of an airport's performance. They are sometimes separated into productivity measures, which track output on a non-cost basis—e.g., passengers per airport employee or departures per gate—and efficiency measures, which track output on a cost basis—e.g., total or operating cost per passenger.

Airport Performance indicators

Example : ACI Guide to Airport Performance Measures

Financial/ Commercial

1. Aeronautical Revenue per Passenger
2. Aeronautical Revenue per Movement
3. Non-Aeronautical Operating Revenue as Percent of Total Operating Revenue
4. Non-Aeronautical Operating Revenue per Passenger
5. Debt Service as Percentage of Operating Revenue
6. Long-Term Debt per Passenger
7. Debt to EBITDA Ratio
8. EBITDA per Passenger

Financial/Commercial – this includes measures relating to airport charges, airport financial strength and sustainability, and the performance of individual commercial

Airport Performance indicators

Example : ACI Guide to Airport Performance Measures

Environmental

1. Carbon Footprint
2. Waste Recycling
3. Waste Reduction Percentage
4. Renewable Energy Purchased by the Airport (Percent)
5. Utilities/Energy Usage per Square Meter of Terminal
6. Water Consumption per Passenger

Environmental – this evolving area has become a strong focus for airport managements striving to minimize environmental impacts.

Airport Performance indicators

ACI Guide to Airport Performance Measures

Core

1. Passengers
2. Origin and Destination Passengers
3. Aircraft Movements
4. Freight or Mail Loaded/Unloaded
5. Destinations—Nonstop

Safety and Security

1. Runway Accidents
2. Runway Incursions
3. Bird Strikes
4. Public Injuries
5. Occupational Injuries
6. Lost Work Time from Employee Accidents and Injuries

Service Quality

1. Practical Hourly Capacity
2. Gate Departure Delay
3. Taxi Departure Delay
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Productivity/Cost Effectiveness

1. Passengers per Employee
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3. Aircraft Movements per Gate
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Environmental

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Principles of Airline Flight Operation Safety

Principles of Airline Flight Operation Safety

Basic Definitions

Aerodrome operating minima. The limits of usability of an aerodrome for:

a) take-off, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions.

Principles of Airline Flight Operation Safety

Basic Definitions

Aerodrome operating minima. The limits of usability of an aerodrome for:

landing in precision approach and landing operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the category of the operation.

Principles of Airline Flight Operation Safety

Basic Definitions

Alternate aerodrome. An aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or to land at the aerodrome of intended landing. Alternate aerodromes include the following:

Take-off alternate. An alternate aerodrome at which an aircraft can land should this become necessary shortly after take-off and it is not possible to use the aerodrome of departure.

En-route alternate. An aerodrome at which an aircraft would be able to land after experiencing an abnormal or emergency condition while en route

Destination alternate. An alternate aerodrome to which an aircraft may proceed when it become either impossible or inadvisable to land at the aerodrome of intended landing

Principles of Airline Flight Operation Safety

Basic Definitions

Maintenance release. A document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner, either in accordance with the approved data and the procedures described in the maintenance organization's procedures manual or under an equivalent system

Principles of Airline Flight Operation Safety

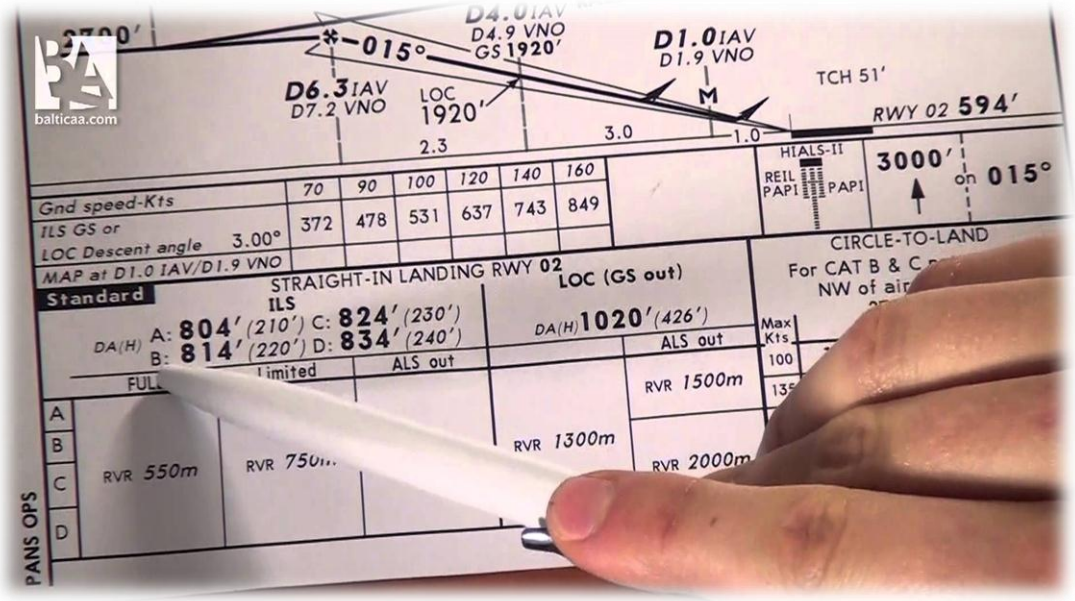
Basic Definitions

Meteorological information. Meteorological report, analysis, forecast, and any other statement relating to existing or expected meteorological conditions.

Principles of Airline Flight Operation Safety

Safe Flight Preparation Procedures

Weather Check



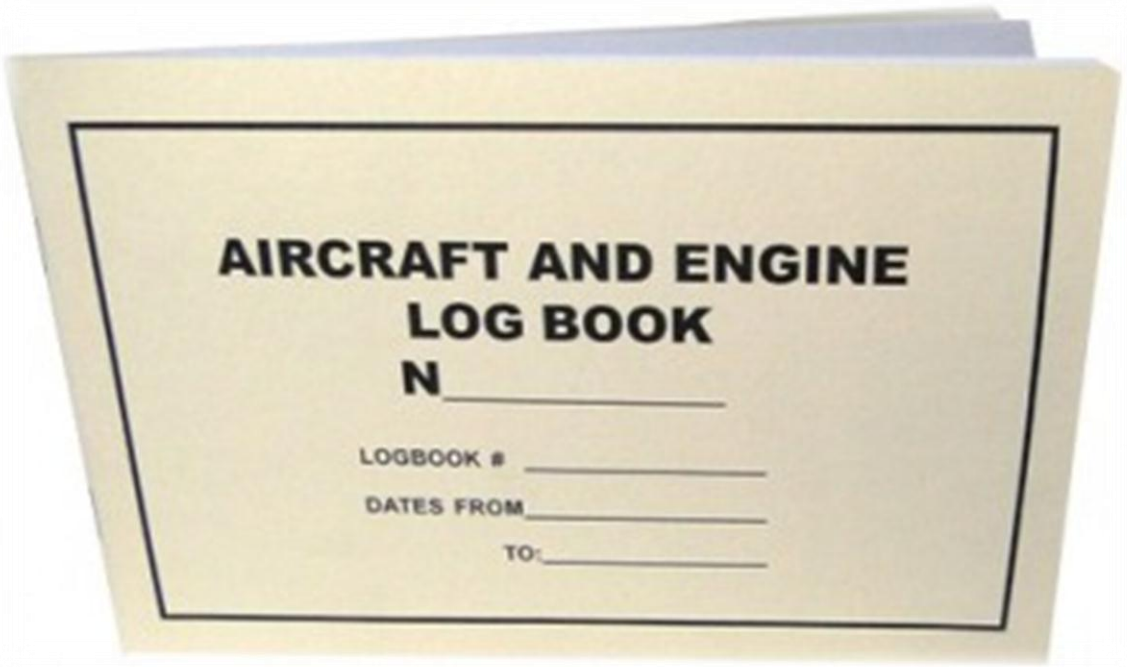
Check Aerodrome operating minima

The pilot-in-command shall not operate to or from an aerodrome using operating minima lower than those which may be established for that aerodrome by the State in which it is located, except with the specific approval of that State.

Principles of Airline Flight Operation Safety

Safe Flight Preparation Procedures

Aircraft Maintenance Status Check



Check Aeroplane airworthiness

A flight shall not be commenced until the pilot in command is satisfied that:

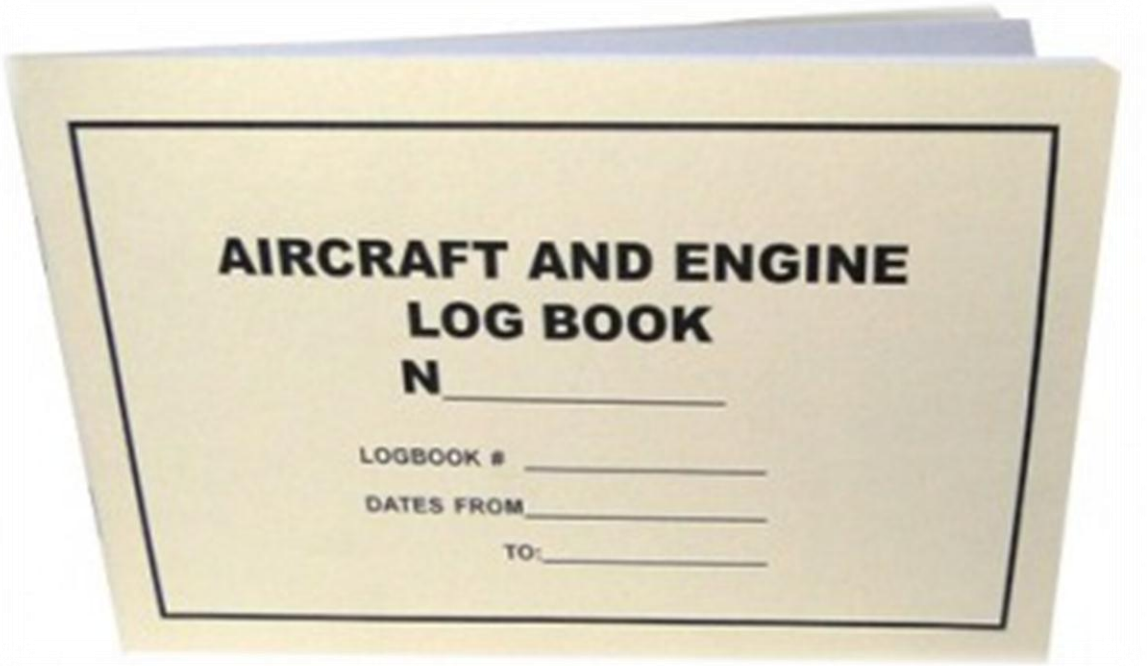
a) the aeroplane is airworthy, duly registered and that appropriate certificates with respect thereto are aboard the aeroplane;

b) the instruments and equipment installed in the aeroplane are appropriate, taking into account the expected flight Conditions.

Principles of Airline Flight Operation Safety

Safe Flight Preparation Procedures

Aircraft Maintenance Status Check



Check Aeroplane airworthiness

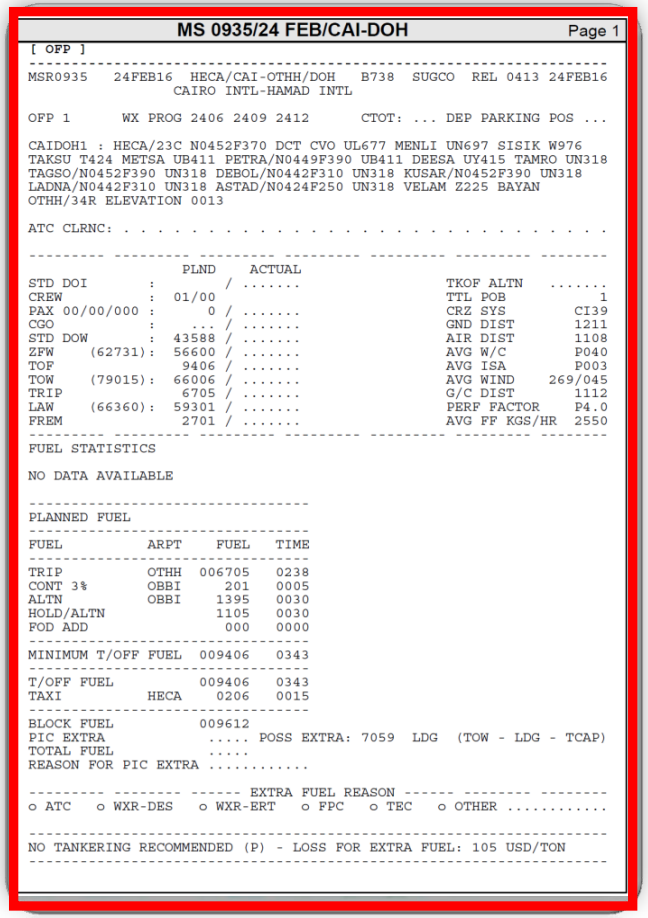
c) the mass of the aeroplane and center of gravity location are such that the flight can be conducted safely, taking into account the flight conditions expected;

d) any load carried is properly distributed and safely secured; and

e) the aeroplane operating limitations, contained in the flight manual, or its equivalent, will not be exceeded.

Principles of Airline Flight Operation Safety

Safe Flight Preparation Procedures



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                    MS 0935/24 FEB/CAI-DOH                    Page 1
[ OFP ]
--------------------------------------------------------------------
MSR0935   24FEB16  HECA/CAI-OTHH/DOH   B738  SUGCO  REL 0413 24FEB16
                CAIRO INTL-HAMAD INTL

OFP 1      WX PROG 2406 2409 2412      CTOT: ... DEP PARKING POS ...

CAIDOH1 : HECA/23C N0452F370 DCT CVO UL677 MENLI UN697 SISIK W976
TAKSU T424 METSA UB411 PETRA/N0449F390 UB411 DEESA UY415 TAMRO UN318
TAGSO/N0452F390 UN318 DEBOL/N0442F310 UN318 KUSAR/N0452F390 UN318
LADNA/N0442F310 UN318 ASTAD/N0424F250 UN318 VELAM Z225 BAYAN
OTHH/34R ELEVATION 0013

ATC CLRNC: . . . . . .

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                PLND    ACTUAL
STD DOI       :       / .......          TKOF ALTN    .......
CREW          :  01/00                   TTL POB            1
PAX 00/00/000 :     0 / .......          CRZ SYS         CI39
CGO           :   ... / .......          GND DIST        1211
STD DOW       :  43588 / .......          AIR DIST        1108
ZFW    (62731):  56600 / .......          AVG W/C         P040
TOF              9406 / .......          AVG ISA         P003
TOW    (79015):  66006 / .......          AVG WIND     269/045
TRIP             6705 / .......          G/C DIST        1112
LAW    (66360):  59301 / .......          PERF FACTOR     P4.0
FREM             2701 / .......          AVG FF KGS/HR   2550
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FUEL STATISTICS

NO DATA AVAILABLE

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PLANNED FUEL
-----------------------------
FUEL          ARPT    FUEL   TIME
-----------------------------
TRIP          OTHH  006705   0238
CONT 3%       OBBI     201   0005
ALTN          OBBI    1395   0030
HOLD/ALTN             1105   0030
FOD ADD                000   0000
-----------------------------
MINIMUM T/OFF FUEL  009406   0343
-----------------------------
T/OFF FUEL          009406   0343
TAXI          HECA    0206   0015
-----------------------------
BLOCK FUEL          009612
PIC EXTRA            ..... POSS EXTRA: 7059  LDG  (TOW - LDG - TCAP)
TOTAL FUEL           .....
REASON FOR PIC EXTRA .............

--------- -------- ------ EXTRA FUEL REASON ------ -------- --------
o ATC   o WXR-DES   o WXR-ERT   o FPC   o TEC   o OTHER .............

--------------------------------------------------------------------
NO TANKERING RECOMMENDED (P) - LOSS FOR EXTRA FUEL: 105 USD/TON
--------------------------------------------------------------------
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Computerized Flight Plan Calculation

Producing the computerized flight plan involves two safety-critical aspects:

- Fuel calculation, to ensure that the aircraft can safely reach the destination, and
- Compliance with air traffic control requirements, In addition, flight planners normally wish to minimize flight cost through the appropriate choice of route, height, and speed, and by loading the minimum necessary fuel on board.

Principles of Airline Flight Operation Safety

Safe Flight Preparation Procedures

Selected Route and Slot Time

A flight plan shall be submitted, before departure, to an air traffic services reporting office or, during flight,transmitted to the appropriate air traffic services unit or air ground control radio station, unless arrangements have been made for submission of repetitive flight plans.

Principles of Airline Flight Operation Safety

Safe Flight Preparation Procedures

Selected Route and Slot Time

Demand is managed by giving the aircraft a slot stating when it can take-off – the 'Calculated Time of Take Off' or CTOT. Normally,

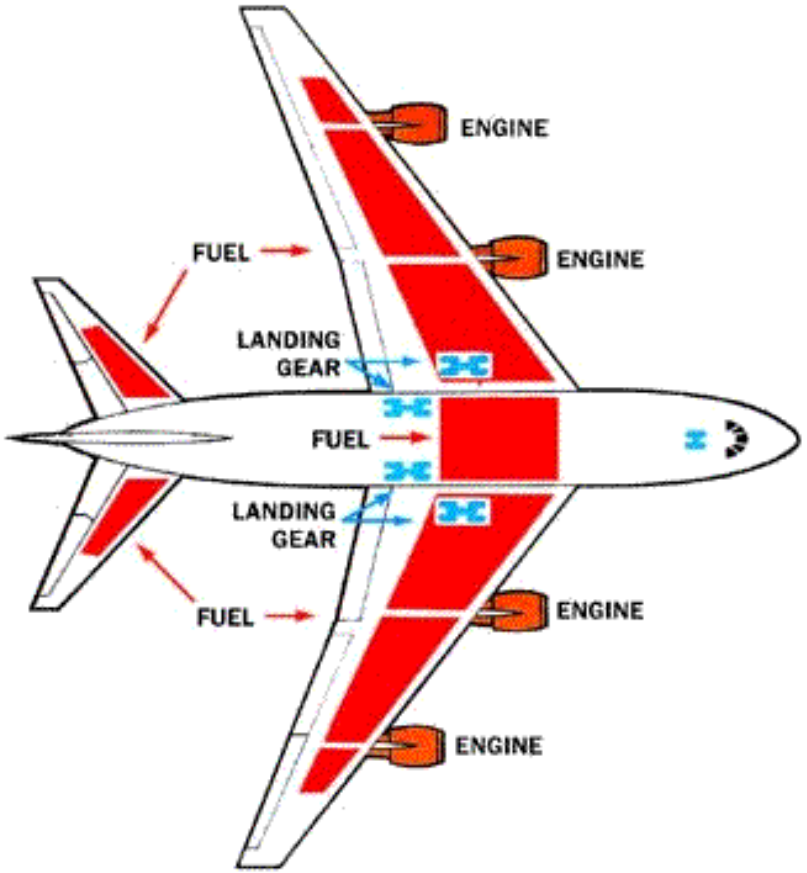
If a slot is within five minutes before the CTOT or within ten minutes after the CTOT.

If the aircraft can't achieve this take-off time, then it has to reapply for a slot.

Principles of Airline Flight Operation Safety

Safe Flight Preparation Procedures

Fuel and oil supply

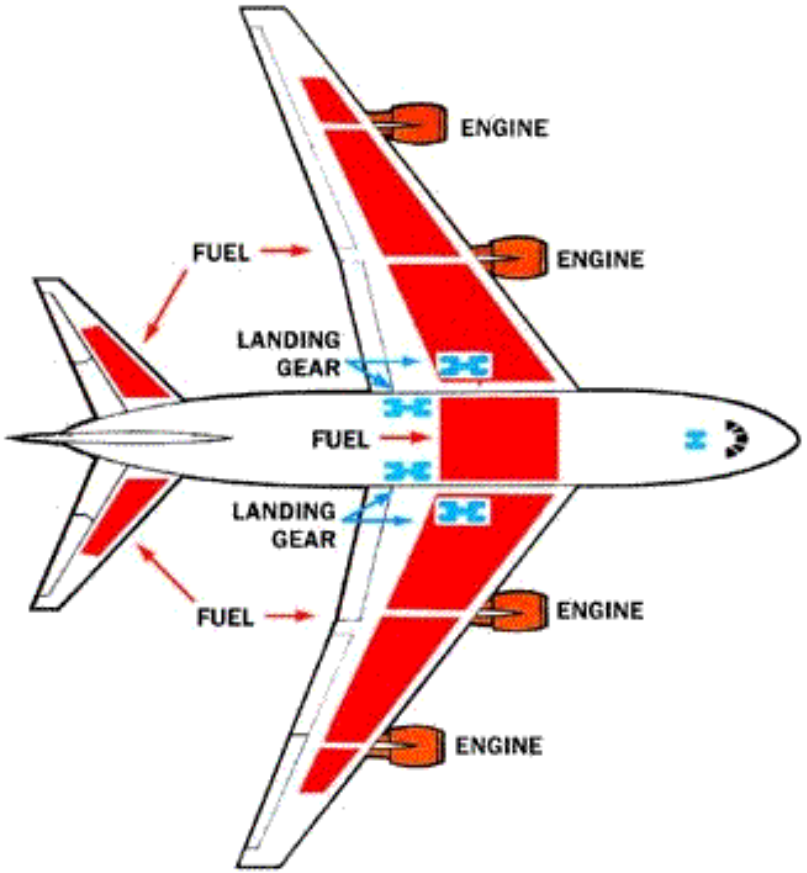


A flight shall not be commenced unless, taking into account both the meteorological conditions and any delays that are expected in flight, the aeroplane carries sufficient fuel and oil to ensure that it can safely complete the flight.

Principles of Airline Flight Operation Safety

Safe Flight Preparation Procedures

Fuel and oil supply



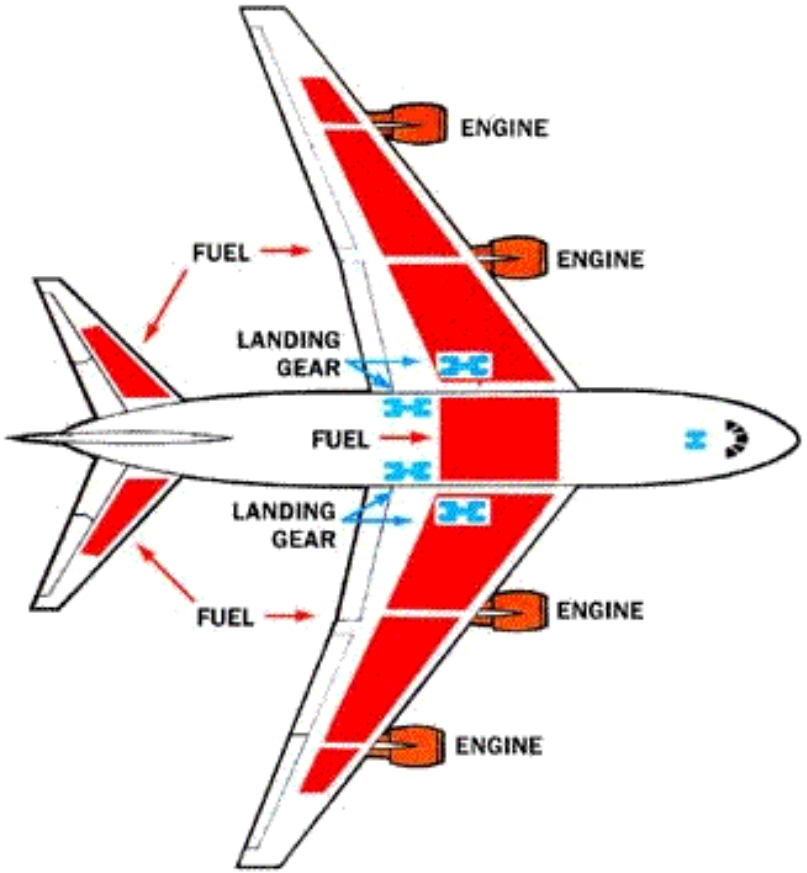
Taxi and APU Fuel

The quantity of fuel required for starting engines, taxing to the active runway and APU consumption. Fuel calculation is based on a number of kg/min., which is different from one aircraft type to the other.

Principles of Airline Flight Operation Safety

Safe Flight Preparation Procedures

Fuel and oil supply



Trip Fuel

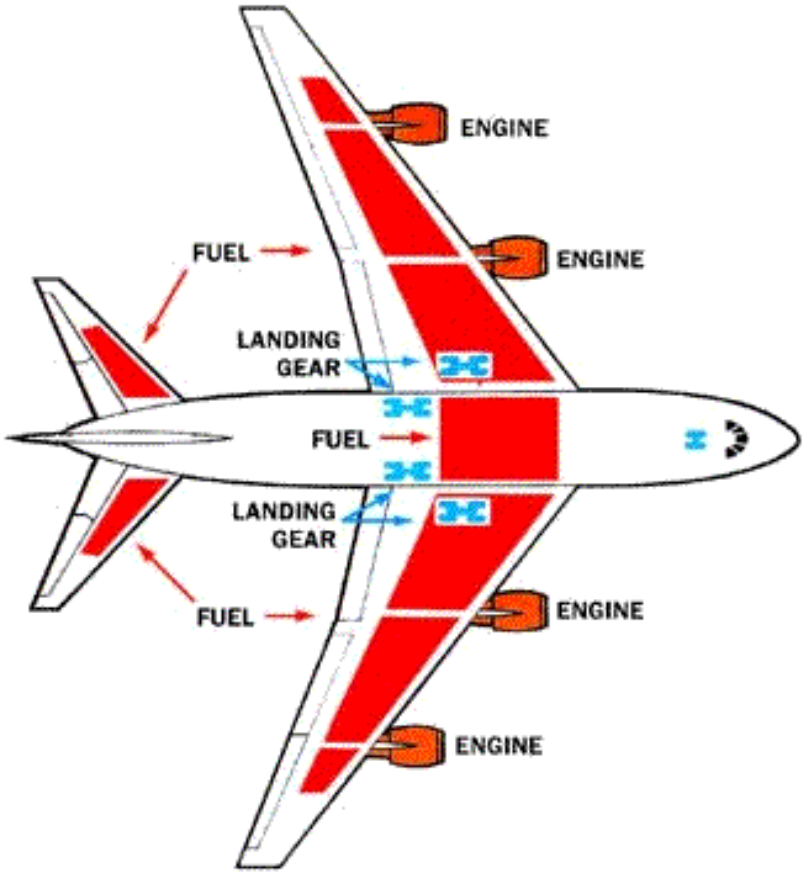
Trip fuel required from takeoff, at the departure airport to destination must include the following fuel quantities:

1)Takeoff and climb at selected speed schedule.
2)Cruise at selected speed schedule.
3)Descent from cruising level at selected speed schedule to initial approach altitude (normally 1500` AGL).
4)Approach and landing fuel calculation.

Principles of Airline Flight Operation Safety

Safe Flight Preparation Procedures

Fuel and oil supply



Alternate Fuel

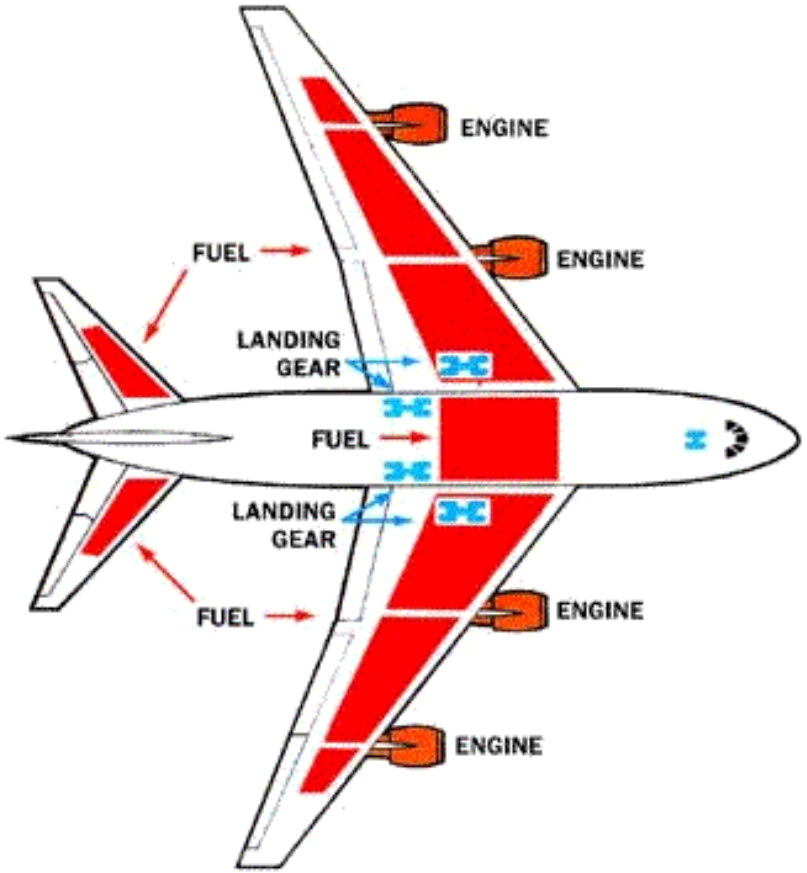
Alternate Fuel is the fuel required to fly from destination to alternate airport, it must include the following fuel quantities:

1)Go-around from the prescribed instrument approach MDA or DH.
2)Climb to cruising level.
3)Cruise at long-range cruise speed schedule.
4)Descent and approach procedure.

Principles of Airline Flight Operation Safety

Safe Flight Preparation Procedures

Fuel and oil supply



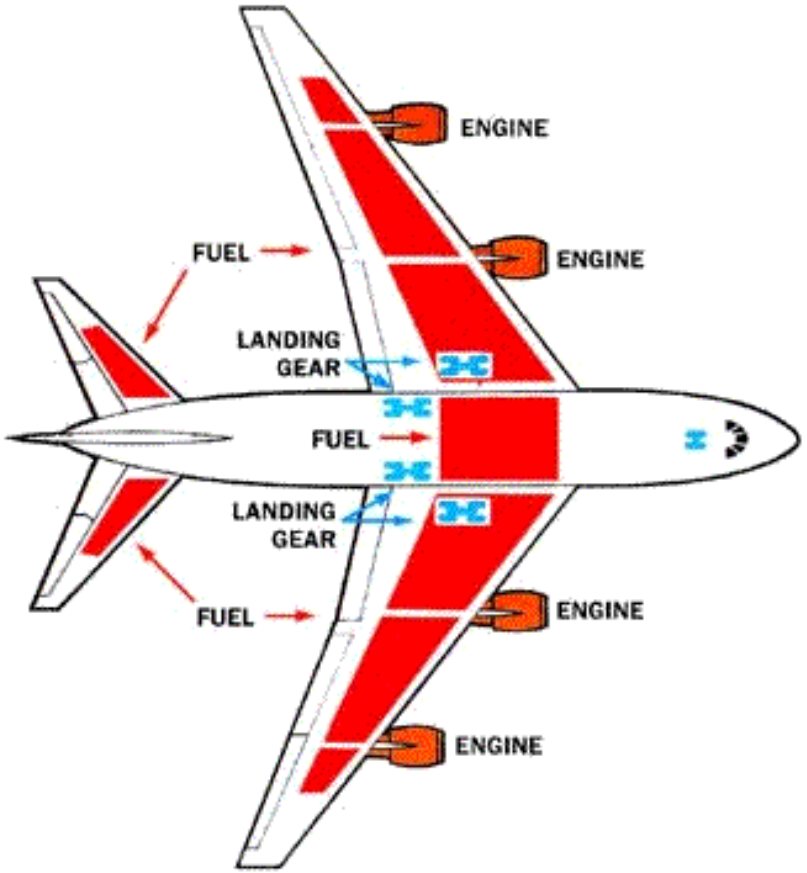
Holding fuel

Is based on a conservative quantity corresponding to 30 minutes at 1500 feet above alternate airport elevation at optimum holding speed.

Principles of Airline Flight Operation Safety

Safe Flight Preparation Procedures

Fuel and oil supply



In Flight Contingencies

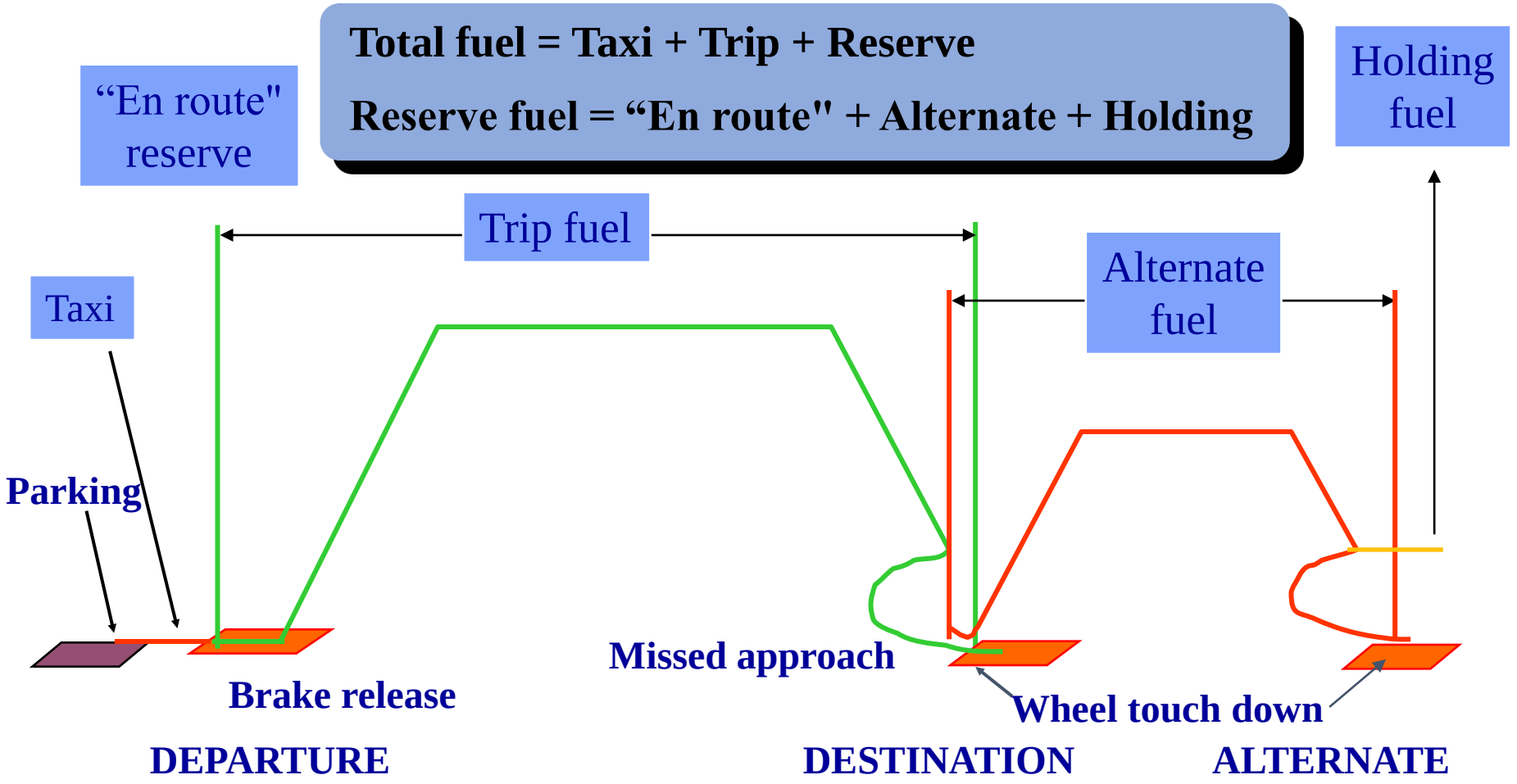
In Flight Contingencies or (en route) reserves is a percentage of **Trip Fuel** as defined in the national regulations and company policy.

This amount of fuel is normally used to cater for:

- Weather avoidance
- Deviation from planned ISA
- Difference between forecasted and actual winds
- ATC constraints
- Etc.

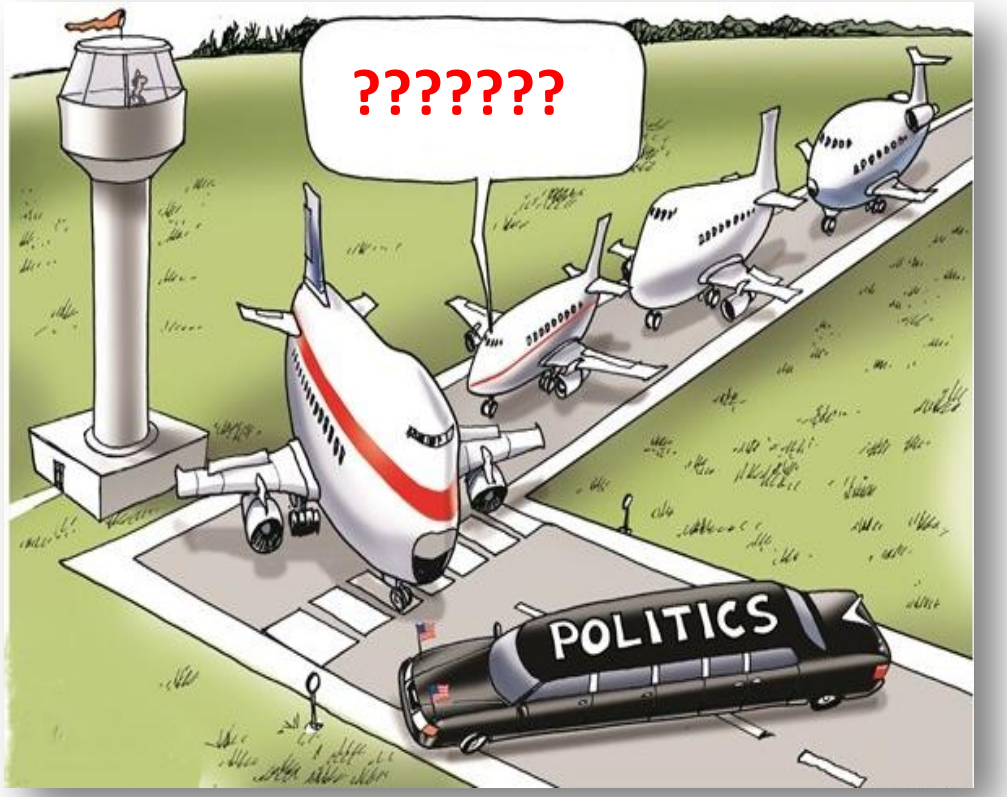
Principles of Airline Flight Operation Safety

Safe Flight Preparation Procedures



Airline Delays Affected Terminal Operations

Airline Delays Affected Terminal Operations



Others

00-05 Airline Internal Codes
06 (OA) No Gate/Stand Availability Due To Own Airline Activity
09 (SG) Scheduled Ground Time Less Than Declared Minimum Ground Time

Airline Delays Affected Terminal Operations

Passenger and Baggage

11 (PD) Late Check-in, acceptance after deadline
12 (PL) Late Check-in, congestions in check-in area
13 (PE) Check-in Error, passenger and baggage
14 (PO) Oversales, booking errors
15 (PH) Boarding, discrepancies and paging, missing checked-in passenger
16 (PS) Commercial Publicity/Passenger Convenience, VIP, press ground meals and issing personal items
17 (PC) Catering Order, late or incorrect order given to supplier
18 (PB) Baggage Processing, sorting etc.
19 (PW) Reduced Mobility, boarding / deboarding of passengers with reduced mobility.

Airline Delays Affected Terminal Operations

Cargo and Mail

21 (CD) Documentation, errors etc.
22 (CP) Late Positioning
23 (CC) Late Acceptance
24 (CI) Inadequate packing
25 (CO) Oversales, booking errors
26 (CU) Late Preparation In Warehouse
27 (CE) Documentation, Packing etc (Mail Only)
28 (CL) Late Positioning (Mail Only)
29 (CA) Late Acceptance (Mail Only)

Airline Delays Affected Terminal Operations

Aircraft and Ramp Handling

31 (GD) Aircraft Documentation Late/Inaccurate, weight and balance, general declaration, pax manifest,etc.
32 (GL) Loading/Unloading, bulky, special load, cabin load, lack of loading staff
33 (GE) Loading Equipment, lack of or breakdown, e.g. container pallet loader, lack of staff
34 (GS) Servicing Equipment, lack of or breakdown, lack of staff, e.g. steps
35 (GC) Aircraft Cleaning
36 (GF) Fuelling/Defuelling, fuel supplier
37 (GB) Catering, late delivery or loading
38 (GU) ULD, lack of or serviceability
39 (GT) Technical Equipment, lack of or breakdown, lack of staff, e.g. pushback.

Airline Delays Affected Terminal Operations

Technical and Aircraft Equipment

41 (TD) Aircraft Defects.
42 (TM) Scheduled Maintenance, late release.
43 (TN) Non-scheduled Maintenance, special checks and/or additional works beyond normal maintenance schedule.
44 (TS) Spares And Maintenance Equipment, lack of or breakdown.
45 (TA) Aog Spares, to be carried to another station.
46 (TC) Aircraft Change, for technical reasons.
47 (TL) Stand-by Aircraft, lack of planned stand-by aircraft for technical reasons.
48 (TV) Scheduled cabin configuration/version adjustments

Airline Delays Affected Terminal Operations

Damage to Aircraft & EDP/Automated Equipment Failure

51 (DF) Damage During Flight Operations, bird or lightning strike, turbulence, heavy or overweight landing ,collision during taxiing

52 (DG) Damage During Ground Operations, collisions (other than during taxiing), loading/off-loading damage, contamination, towing, extreme weather conditions

55 (ED) Departure Control

56 (EC) Cargo preparation/documentation

57 (EF) Flight Plans

58 (EO) Other automated system

Airline Delays Affected Terminal Operations

Flight Operations and Crewing

61 (FP) Flight Plan, late completion or change of, flight documentation
62 (FF) Operational Requirements, fuel, load alteration
63 (FT) Late Crew Boarding Or Departure Procedures, other than connection and standby (flight deck or entire crew)
64 (FS) Flight Deck Crew Shortage, sickness, awaiting standby, flight time limitations, crew meals,valid visa, health documents, etc.

Airline Delays Affected Terminal Operations

Flight Operations and Crewing

65 (FR) Flight Deck Crew Special Request, not within operational requirements

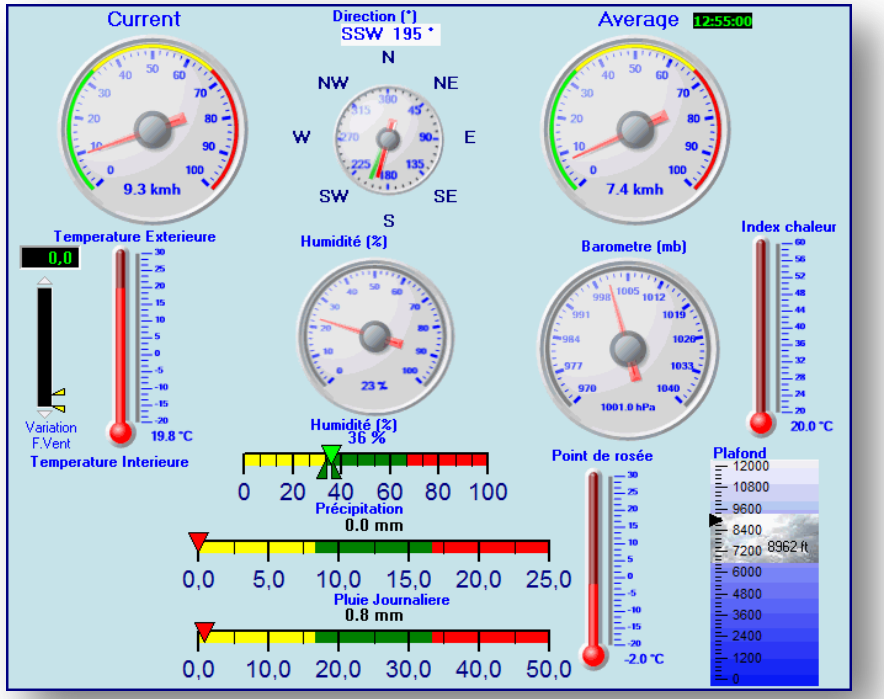
66 (FL) Late Cabin Crew Boarding Or Departure Procedures, other than connection and standby

67 (FC) Cabin Crew Shortage, sickness, awaiting standby, flight time limitations, crew meals, valid visa, health documents, etc.

68 (FA) CABIN CREW ERROR OR SPECIAL REQUEST, not within operational requirements

69 (FB) Captain Request For Security Check, extraordinary

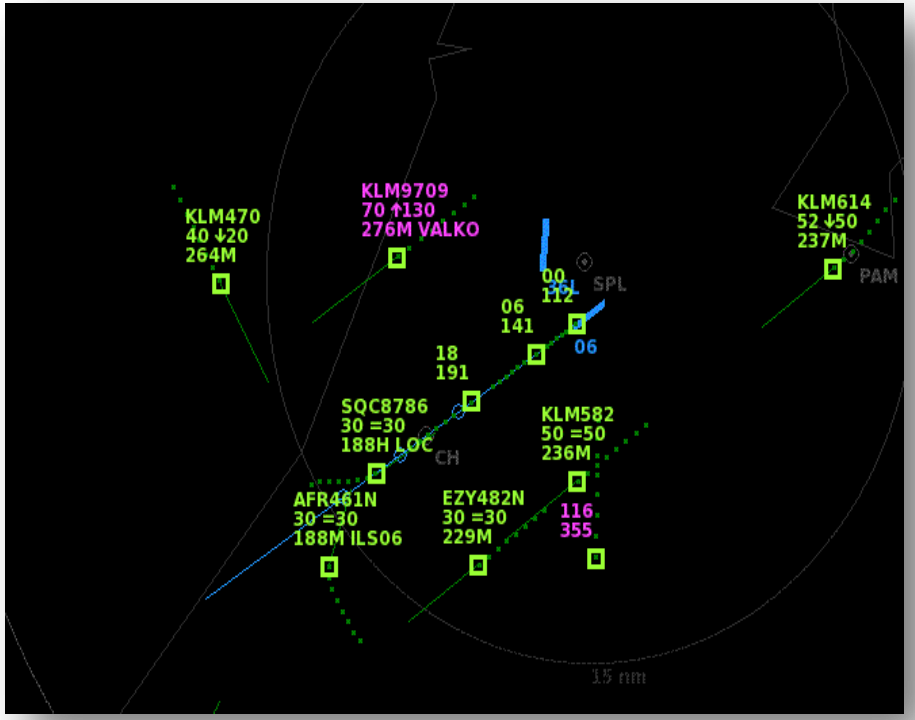
Airline Delays Affected Terminal Operations



Weather

71 (WO) Departure Station
72 (WT) Destination Station
73 (WR) En Route Or Alternate
75 (WI) De-icing Of Aircraft, removal of ice and/or snow, frost prevention excluding unserviceability of equipment
76 (WS) Removal Of snow, ice, water and sand from Airport
77 (WG) Ground Handling Impaired By Adverse Weather Conditions

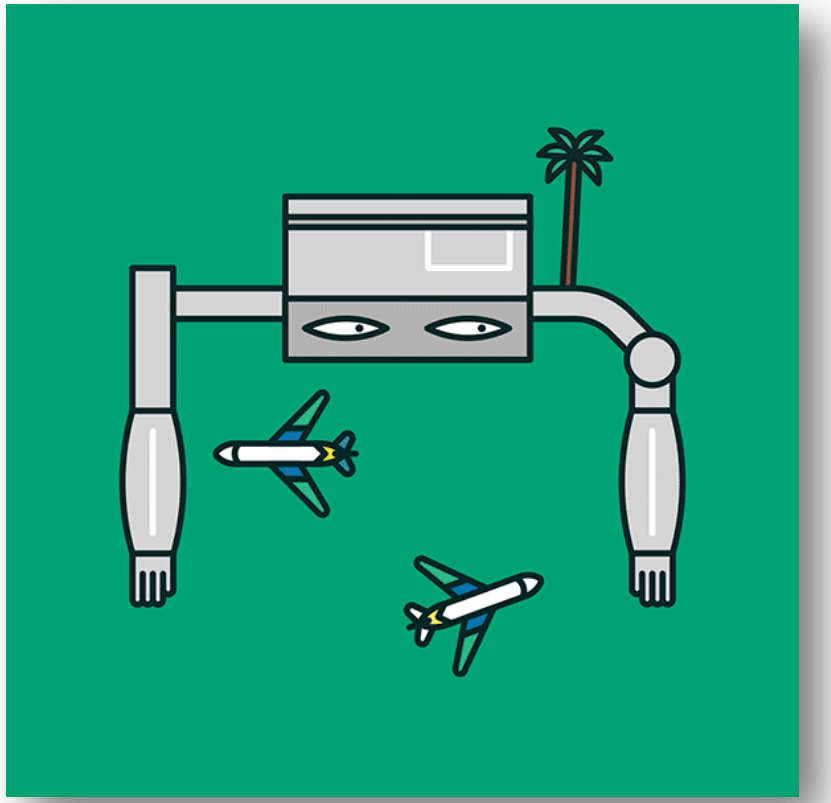
Airline Delays Affected Terminal Operations



Air Traffic Flow Management Restrictions

81 (AT) ATFM Due To ATC En-route Demand/Capacity, standard demand/capacity problems
82 (AX) ATFM Due To Atc Staff/Equipment En-route, reduced capacity caused by industrial action or staff shortage, equipment failure, military exercise or extraordinary demand due to capacity reduction in neighbouring area
83 (AE) ATFM due to RESTRICTION AT DESTINATION AIRPORT, airport and/or runway closed due to obstruction, industrial action, staff shortage, political unrest, noise abatement, night curfew, special flights 84 (AW) ATFM Due To Weather At Destination

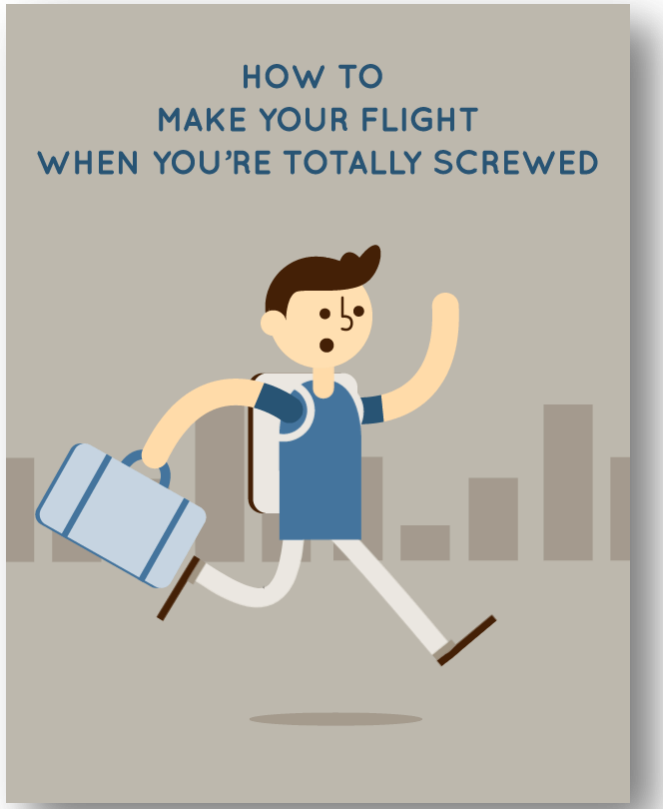
Airline Delays Affected Terminal Operations



Airport And Governmental Authorities

85 (AS) Mandatory security
86 (AG) Immigration, Customs, Health
87 (AF) Airport Facilities, parking stands, ramp congestion, lighting, buildings, gate limitations, etc.
88 (AD) Restrictions At Airport Of Destination, airport and/or runway closed due to obstruction, industrial action, staff shortage, political unrest, noise abatement, night curfew, special flights
89 (AM) Restrictions at airport of departure with or without ATFM restrictions, including Air Traffic Services, start-up and pushback, airport and/or runway closed due to obstruction or weather1, industrial action, staff shortage, political unrest, noise abatement, night curfew, special flights

Airline Delays Affected Terminal Operations



Reactionary

91 (RL) Load Connection, awaiting load from another flight
92 (RT) Through Check-in Error, passenger and baggage
93 (RA) Aircraft Rotation, late arrival of aircraft from another flight or previous sector
94 (RS) Cabin Crew Rotation, awaiting cabin crew from another flight
95 (RC) Crew Rotation, awaiting crew from another flight (flight deck or entire crew)
96 (RO) Operations Control, re-routing, diversion, consolidation, aircraft change for reasons other than technical

Airline Delays Affected Terminal Operations

Miscellaneous

97 (MI) Industrial Action With Own Airline
98 (MO) Industrial Action Outside Own Airline, excluding ATS
99 (MX) Other Reason, not matching any code above

Aerodrome Emergency Plans AEP

Aerodrome Emergency Plans AEP

What is AEP?

The process of preparing an aerodrome to manage with an emergency occurring at the aerodrome or in its vicinity.

Annex 14

Aerodrome Emergency Plans AEP

What are the objective(s) of AEP?

To minimize the effects of an emergency, particularly in respect of saving lives and maintaining aircraft operations.

Annex 14

Aerodrome Emergency Plans AEP

What do the AEP contain?

The aerodrome emergency plan establish the procedures for coordinating the response of different aerodrome agencies (or services) and of those agencies in the surrounding community that could be of assistance in responding to the emergency

Annex 14

Aerodrome Emergency Plans AEP

Annex 14

An aerodrome emergency plan shall be established at an aerodrome, commensurate with the aircraft operations and other activities conducted at the aerodrome.

The aerodrome emergency plan shall provide for the coordination of the actions to be taken in an emergency occurring at an aerodrome or in its vicinity.

- *Note 1.— Examples of emergencies are : aircraft emergencies, sabotage including bomb threats, unlawful seized aircraft, dangerous goods occurrences, , building fires, natural disaster and public health emergencies .*
- *Note 2.— Examples of public health emergencies are increased risk of travellers or cargo spreading a serious communicable disease internationally through air transport and severe outbreak of communicable disease potentially affecting a large proportion of aerodrome staff*

Aerodrome Emergency Plans AEP

Types of Emergency Situation:

- *aircraft emergencies.*
- *sabotage including bomb threats.*
- *unlawful seized aircraft.*
- *dangerous goods occurrences.*
- *building fires.*
- *natural disaster.*
- *public health emergencies.*

Aerodrome Emergency Plans AEP

Public Health Emergencies :

Examples of are: increased risk of travellers or cargo spreading a serious communicable disease internationally through air transport and severe outbreak of a communicable disease potentially affecting a large proportion of aerodrome staff.

Aerodrome Emergency Plans AEP

Agencies Involved In The Plan

The plan shall coordinate the response or participation of all existing agencies which, in the opinion of the appropriate authority, could be of assistance in responding to an emergency.

- *On The Aerodrome*

- *air traffic control unit.*
- *rescue and fire fighting services.*
- *aerodrome administration.*
- *medical and ambulance services.*
- *aircraft operators.*
- *security services and*
- *police.*

Aerodrome Emergency Plans AEP

Agencies Involved In The Plan

The plan shall coordinate the response or participation of all existing agencies which, in the opinion of the appropriate authority, could be of assistance in responding to an emergency.

- *Off The Aerodrome*

- *fire departments.*
- *police. health authorities(including medical, ambulance, hospital and public health services)*
- *military, and harbour patrol or cost guard.*

Aerodrome Emergency Plans AEP

Emergency Operations Centre And Command Post

Availability of a fixed emergency operations centre and mobile command post for use during emergency

The emergency operations centre should be a part of the aerodrome facilities and should be responsible for the overall coordination and general direction of the response to an emergency

Aerodrome Emergency Plans AEP

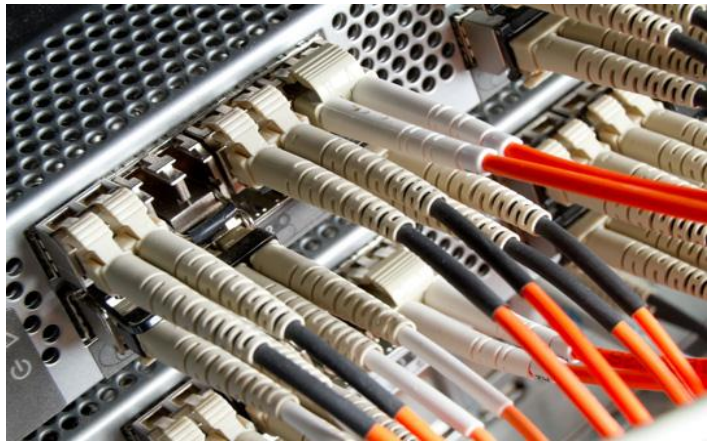
Emergency Operations Centre And Command Post

The command post should be a facility capable of being moved rapidly to the site of an emergency, when required, and should undertake the local coordination of those agencies responding to the emergency.

A person should be assigned to assume control of the emergency operations centre and, when appropriate, another person the command post

Aerodrome Emergency Plans AEP

Communication System



Adequate communication systems linking the command post and the emergency operations centre with each other and with the participating agencies should be provided in accordance with the plan and consistent with the particular requirements of the aerodrome.

Aerodrome Emergency Plans AEP

Aerodrome Emergency Exercise

The plan shall contain procedures for periodic testing of the adequacy of the plan and for reviewing the results in order to improve its effectiveness

The plan includes all participating agencies and associated equipment

Aerodrome Emergency Plans AEP

The plan shall be tested by conducting:
a) a full-scale aerodrome emergency exercise at intervals not exceeding two years; and
b) partial emergency exercises in the intervening year to ensure that any deficiencies found during the full-scale aerodrome emergency exercise have been corrected; and reviewed thereafter, or after an actual emergency, so as to correct any deficiency found during such exercises or actual emergency

Aerodrome Emergency Plans AEP

Aerodrome Emergency Exercise

The purpose of a full-scale exercise is to ensure the adequacy of the plan to cope with different types of emergencies. The purpose of a partial exercise is to ensure the adequacy of the response to individual participating agencies and components of the plan, such as the communications system.

Aerodrome Emergency Plans AEP

Emergencies In Difficult Environments

The plan shall include the ready availability of, and coordination with, appropriate specialist rescue services to be able to respond to emergencies where an aerodrome is located close to water and/or swampy areas and where a significant portion of approach or departure operations takes place over these areas.

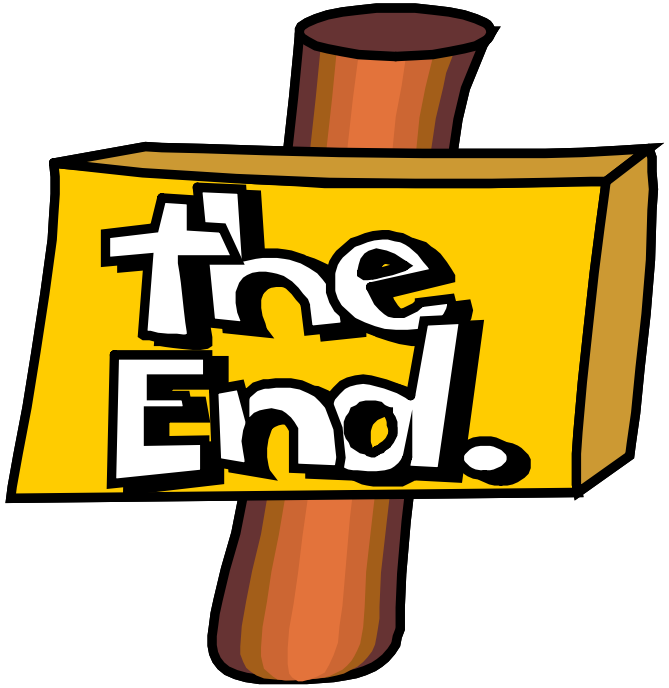
Aerodrome Emergency Plans AEP

Emergencies In Difficult Environments

At those aerodromes located close to water and/or swampy areas, or difficult terrain, the aerodrome emergency plan should include the establishment, testing and assessment at regular intervals of a predetermined response for the specialist rescue services.

List of References

ACI : Airport Council INTL. Airport Performance indicators
ICAO DOC. 9157
ICAO DOC. 9137
ICAO annex 9
ICAO Facilitation Program 2015.
ICAO Document : Annex 14.
IATA : International Air Transport Association Delay Codes.
IATA: STB Simplifying The Business
IATA: FTE Future Travel Experience
ORAT FAM Training (Cairo Airport)


the End.