



SIP/2004-WP4
Business Case

INTERNATIONAL CIVIL AVIATION ORGANIZATION

MIDDLE EAST OFFICE

ICAO SPECIAL IMPLEMENTATION PROJECT (SIP)

**WORKSHOP ON
THE DEVELOPMENT OF BUSINESS CASE
FOR THE IMPLEMENTATION OF CNS/ATM SYSTEMS**

(CAIRO, 6 - 9 SEPTEMBER 2004)

**SAMPLE TEMPLATES FOR PROVIDING DATA
FOR DEVELOPMENT OF BUSINESS CASE
FOR THE IMPLEMENTATION OF CNS/ATM SYSTEMS**

State: _____
Region: _____
Date: _____

CURRENT INFRASTRUCTURE

TABLE 1

Current infrastructure – Airports

SNo	NAME	INTERNATIONAL AND/OR DOMESTIC	AERODROME LAYOUT	NO. OF RUNWAYS/ CONFIGURATION
1	XXX ¹	International	Complex	2-parallel

Qualification

- a) New airports, if planned, may also be stated separately.
- b) Aerodrome layout may be classified as basic, simple or complex.
 - Basic – An aerodrome with one runway with one taxiway to one apron area.
 - Simple – An aerodrome with one runway having more than one taxiway to one or more apron area(s).
 - Complex – An aerodrome with more than one runway, having many taxiways to one or more apron area(s).
- c) Runway configuration may be converging, intersecting, parallel or near parallel.

¹ Example; to assist in completing Table

TABLE 2

Current infrastructure – Voice communications (VHF RT, HF RT, ATIS and VOLMET)

SNO	SYSTEM	LOCATION(S)	QTY	DATE OF INSTALLATION	UNTIL WHEN CURRENT SYSTEM EXPECTED TO PROVIDE SATISFACTORY SERVICE
1	VHF RT ²	XXX	10	Oct. 1990	Oct. 2005
2	VHF RT ²	YYY	15	Jan. 2000	Jan. 2015
3	VHF RT ²	Δ ZZZ	20	Feb. 2005	Feb. 2020
4	VHF RT ²	* RRR	10	Oct. 2004	Oct. 2019

Qualification

- a) VHF RT refers to all phases of flight.
- b) HF RT includes both MWARA and RDARA frequencies.
- c) ATIS is automatic terminal information service operating in VHF band.
- d) VOLMET (meteorological information for aircraft in flight) is a voice broadcast on HF about meteorological information.
- e) The equipment planned or under installation may also be shown.
- f) Assume 15 years of life.
- g) Δ Indicate facility, which is under installation.
- h) * Indicate facility, which is planned.
- i) Main and standby equipment together constitute one system in operation.

² Example; to assist in completing Table

TABLE 3

Current infrastructure – Navigation: NDB, VOR (CVOR/DVOR) and DME

SNO	SYSTEM	LOCATION(S)	QTY	DATE OF INSTALLATION	UNTIL WHEN CURRENT SYSTEM EXPECTED TO PROVIDE SATISFACTORY SERVICE

Qualification

- a) Assume 15 years of life.
- b) Δ Indicate facility, which is under installation.
- c) * Indicate facility, which is planned.

TABLE 4

Current infrastructure – Navigation: ILS (including DME)

SNO	SYSTEM	LOCATION(S)	QTY	DATE OF INSTALLATION	UNTIL WHEN CURRENT SYSTEM EXPECTED TO PROVIDE SATISFACTORY SERVICE

Qualification

- a) Assume 15 years of life.
- b) Δ Indicate facility, which is under installation.
- c) * Indicate facility, which is planned.
- d) ILS includes markers, locators and DME, as the case may be.

TABLE 5

**Current infrastructure – Surveillance:
All primary (ARSR, ASR, ASDE) and secondary radars (Mode A/C, Mode S)**

SNO	SYSTEM	LOCATION(S)	QTY	DATE OF INSTALLATION	UNTIL WHEN CURRENT SYSTEM EXPECTED TO PROVIDE SATISFACTORY SERVICE

Qualification

- a) Assume 15 years of life
- b) Modes A/C of SSR and Mode S of SSR may be indicated separately
- c) Δ Indicate facility, which is under installation.
- d) * Indicate facility, which is planned.
- e) PSR (terminal) is also known as ASR
- f) PSR (en-route) is also known as ARSR
- g) ASDE is airport surface detection equipment

AIR TRAFFIC FORECASTS

TABLE 6**Summary of air traffic forecasts for the years 2008/2013/2018**

	ACTUAL 2003	ESTIMATE 2004	FORECAST			AVERAGE ANNUAL GROWTH RATE (PER CENT)		
			2008	2013	2018	2004-2008	2009-2013	2014-2018
Aircraft movements (thousands)								
Domestic								
International								
Total								
Over-flying aircraft (thousands)								
Total								

TABLE 7**Aircraft hours in national airspace**

MOVEMENT	AVERAGE FLIGHT DURATION IN NATIONAL AIRSPACE <i>(in hours)</i>
International	
Domestic	
Overflight	

TRANSITION METHODOLOGY

TABLE 8

Ground/ground data communications transition

NEW SYSTEMS – PLANNED Or IMPLEMENTED		INDICATE DATE PLANNED Or IMPLEMENTED	CURRENT SYSTEMS – POTENTIAL FOR PHASE-OUT		INDICATE ESTIMATED POTENTIAL PHASE-OUT DATE
LOCATION	SYSTEM		LOCATION	SYSTEM	

TABLE 9

Air/ground data communications transition

NEW SYSTEMS – PLANNED Or IMPLEMENTED		INDICATE DATE PLANNED Or IMPLEMENTED	CURRENT SYSTEMS – POTENTIAL FOR PHASE-OUT		INDICATE ESTIMATED POTENTIAL PHASE-OUT DATE
LOCATION	SYSTEM		LOCATION	SYSTEM	

TABLE 10

Ground/ground voice communications transition

NEW SYSTEMS – PLANNED Or IMPLEMENTED		INDICATE DATE PLANNED Or IMPLEMENTED	CURRENT SYSTEMS – POTENTIAL FOR PHASE-OUT		INDICATE ESTIMATED POTENTIAL PHASE-OUT DATE
LOCATION	SYSTEM		LOCATION	SYSTEM	

TABLE 11

Air/ground voice communications transition

NEW SYSTEMS – PLANNED Or IMPLEMENTED		INDICATE DATE PLANNED Or IMPLEMENTED	CURRENT SYSTEMS – POTENTIAL FOR PHASE-OUT		INDICATE ESTIMATED POTENTIAL PHASE-OUT DATE
LOCATION	SYSTEM		LOCATION	SYSTEM	

TABLE 12

Navigation transition

NEW SYSTEMS – PLANNED Or IMPLEMENTED		INDICATE DATE PLANNED Or IMPLEMENTED	CURRENT SYSTEMS – POTENTIAL FOR PHASE-OUT		INDICATE ESTIMATED POTENTIAL PHASE-OUT DATE
LOCATION	SYSTEM		LOCATION	SYSTEM	

TABLE 13

Surveillance transition

NEW SYSTEMS – PLANNED Or IMPLEMENTED		INDICATE DATE PLANNED Or IMPLEMENTED	CURRENT SYSTEMS – POTENTIAL FOR PHASE-OUT		INDICATE ESTIMATED POTENTIAL PHASE-OUT DATE
LOCATION	SYSTEM		LOCATION	SYSTEM	

TABLE 14

**Air traffic management transition
Proposed implementation of systems/procedures for enhancing/improving ATM**

AIRSPACE MANAGEMENT		AIR TRAFFIC SERVICES		AIR TRAFFIC FLOW MANAGEMENT	
SYSTEMS/ PROCEDURES	DATE	SYSTEMS / PROCEDURES	DATE	SYSTEMS / PROCEDURES	DATE

— END —