



International Civil Aviation Organization

**ICAO Special Implementation Project (SIP) – Workshop on the development of a
business case for the implementation of CNS/ATM systems**

Lima, Peru, 10 to 14 November 2008

**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. 2009	Feb. 2024
4	VHF RT ²	* RRR	10	Oct. 2010	Oct. 2025

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 7

Summary of air traffic forecasts up to year 2025

	ACTUAL 2007	ESTIMATE 2008	FORECAST				AVERAGE ANNUAL GROWTH RATE (PER CENT)			
			2010	2015	2020	2025	2005-2010	2010-2015	2015-2020	2020-2025
Passengers (millions)										
Domestic										
International										
Total										
Freight (thousand metric tonnes)										
Domestic										
International										
Total										
Aircraft movements (thousands)										
Domestic										
International										
Total										
Over-flying aircraft (thousands)										
Total										

Qualification

- a) For the forecast, provide the absolute figures and/or the growth rates
- b) Focus should be put on the aircraft movements/over-flights forecasts; passengers and freight forecasts are provided in the absence of aircraft movements forecasts

TRANSITION PLAN

TABLE 16

**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
FLEXIBLE USE OF AIRSPACE*		RVSM*		ATFM DATABASE*	
MILITARY/CIVIL COORDINATION*		RNAV 5*		CAPACITY BALANCING	
		DECISION SUPPORT SYSTEMS*			

— END —

***Note:** Information provided in the Table 16 are examples.

Decision support systems may include the following: STCA, MTCA, Database for route catalogue, etc.