ORGANISATION DE L'AVIATION CIVILE INTERNATIONALE

AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP THIRTEENTH MEETING (APIRG13)
(Sal, Cap Verde 25-29 June 2001)

Agenda item 4 : **Business case development data**

(Presented by ASECNA)

SUMMARY

It was agreed at ALLPIRG/3 that regional planning group should perform cost/benefits analyses to validate and substantiate the different implementation options and develop the necessary business cases for their financing. During ALLPIRG/4, CNS/ATM Planning and evaluation tools were presented alongside with the data requirements, data that are essential for the development of the business case. During the fist meeting of the Implementation Co-ordination Group for the AR4, ASECNA and IATA agreed to prepare a business case which will be presented at this meeting. This working paper presents the framework of the business cases for the AFI routing area. ASECNA presented the preliminary developments for the AR4 and AR5 at the relevant ICGs. Nevertheless, additional data from states or organisation are required to complete the business cases.

1 Introduction

Pursuant to Recommendation 3/9 and 3/16 of the Worldwide CNS/ATM systems implementation Conference in Rio in 1998 and subsequent endorsement by the 32nd Session of the Assembly, the need for a sound business case (or plan) to guide CNS/ATM was highlighted. Indeed, the implementation of CNS/ATM is slow and only a credible business case can justify the specific CNS/ATM requirements of both the service provider and the service users.

In order to co-ordinate and prepare the CNS/ATM business case, a lot of data are required such as traffic flows and forecast, inventory and cost of existing equipment, schedule and cost of implementation and operation of new CNS/ATM, personnel requirements,…

In this paper, ASECNA is providing the templates of the required data, in compliance with the Allpirg recommendations. All costs must be expressed in US $.

2 DATA REQUIREMENTS

2.1 Traffic density and traffic flows

For establishing the business cases for the AR4 and AR5, presented respectively in March and April 2001, ASECNA used two types of data:

1. The data extracted from the " Movement Forecast for the Africa Continent, 1998-2012" study, result of a project awarded to the Aviation Information and Research Department (AIR) of IATA by ASECNA in the framework of the GNSS Phase 2 study. Data is collected to establish base year passenger traffic (year 1997) between countries, and forecast growth rates for the next five years (1998-2002), and average annual growth rates for the years 2007 and 2012.
2. ASECNA traffic data, which correspond to the real flights over each ASECNA FIR, for the year 1999 and main part of the year 2000.

2.2 Inventory and cost of current Air Navigation equipment

2.2.1 Communication system

COUNTRY	FIR	LOCATION	EQUIPMENT TYPE	Qty	First Oper. date	Acquisition Unit cost	Installation unit cost	Repair unit cost	Operating unit cost

Actual communication costs

Specialised lines	Satellite (Intelsat)	Commuted lines	Misc./Provisions	Total

2.2.2 Navigation system (for both en-route and Approach and Landing systems)

COUNTRY	FIR	LOCATION	EQUIPMENT TYPE	Qty	First Oper. date	Acquisition Unit cost	Installation Unit cost	Repair Unit cost	Operating Unit cost

2.2.3 Surveillance system

COUNTRY	FIR	LOCATION	EQUIPMENT TYPE	Qty	First Oper. date	Acquisition Unit cost	Installation Unit cost	Repair Unit cost	Operating Unit cost

2.2.4 ATM system

COUNTRY	FIR	LOCATION	EQUIPMENT TYPE	Qty	First Oper. date	Acquisition Unit cost	Installation Unit cost	Repair Unit cost	Operating Unit cost

2.3 Implementation schedule and cost of new air navigation equipment (CNS/ATM systems)

SCHEDULE AND COST OF NEW COMMUNICATION ÉQUIPMENT

COUNTRY	FIR	LOCATION	EQUIPMENT TYPE	Qty	First Oper. date	Acquisition Unit cost	Installation unit cost	Repair unit cost	Operating unit cost

IMPLEMENTATION AND COST SCHEDULE FOR NAVIGATION EQUIPMENT

COUNTRY	FIR	LOCATION	EQUIPMENT TYPE	Qty	First Oper. date	Acquis. Unit cost	Install. unit cost	Repair unit cost/y	Operating unit cost/y

IMPLEMENTATION AND COST SCHEDULE FOR SURVEILLANCE EQUIPMENT

EQUIPEMENT	Location	FIR	Acquis. Cost	Install. Cost	Repair/update Cost/year	Operating Cost/year	Acquisition date	Exploitation Starting date

IMPLEMENTATION AND COST SCHEDULE FOR ATM EQUIPMENT

EQUIPEMENT	Location	FIR	Acquis. Cost	Install. Cost	Repair/update Cost/year	Operating Cost/year	Acquisition date	Exploitation Starting date

2.4 Personnel requirement for current system

Existing Maintenance staff

State	Electronic Eng.	Electric Eng.	Execution agent	Miscellaneous
Total				

Existing operational staff

State	Controller	Assistant	ATS reporting office agent	Miscellaneous
Total				

2.5 Personnel requirement for new CNS/ATM systems operations

Existing Maintenance staff

State	Electronic Eng.	Electric Eng.	Execution agent	Miscellaneous
Total				

Planned operational staff

State	Controller	Assistant	ATS reporting office agent	Miscellaneous
Total				

2.6 Cost of relocation or attrition of personnel and training

To be completed

2.7 Cost of vacating or re-organising infrastructure

To be completed

2.8 Cost of operation of service provider

To be completed

2.9 Current level of user charges

Provide a table giving an indication of the user charge (in US $) for international aircraft overflying …. FIR.

AIRCRAFT (Weight in metric tons)	DISTANCE 0-750 km	750-2000 km	2000-3500 km	> 3500 km²

2.10 Transition period and evolution

Provide comments on the transition period for the communication, navigation, surveillance and ATM domains

3 Main impediments

The following items have to be defined:

- Lack of co-ordination and co-operation between partners
- Lack of co-ordination and consultation between service providers with adjacent areas of responsibility:
- Non-homogeneity of areas selected and redundancy of facilities and equipment
- Ambiguous institutional or legal format
- Lack of guarantees or collateral :
- Lack of an effective cost revenue accounting system
- Unavailability or inaccuracy of data required (Traffic forecast, existing equipment, scheduled equipment , GNSS availability

4 Conclusion

This paper represents the ASECNA contribution for the development of the business cases. The ASECNA presented preliminary results of the AR4 and AR5 business cases during the relevant ICG. Nevertheless, while some ASECNA data need to be updated (traffic and staff mainly), the data of the others states or organisation for area of routing should be provided if one complete the business cases.
It was scheduled to get the data for AR5 and AR4 in time for processing them (by using the ICAO CBA tool) and present the results at this meeting. Unfortunately, no data was forwarded to ASECNA.
Thus, the following step is to get all the corresponding data from the other states or organisation involved in the domain so as to aggregated them for presentation at the next ICGs.
ASECNA suggests limiting the business case development to some specific areas of routing (e.g. AR1, AR4 and AR5).

5 Action by the meeting

The meeting is invited to review the material, comment as necessary and provide to ASECNA (through ICAO regional Offices), in a timely manner, the necessary data to complete the business cases.