

**ACTION PLAN FOR IMPLEMENTATION OF REDUCED
VERTICAL SEPARATION MINIMA IN THE AFRICA-
INDIAN OCEAN REGION**

23 April 2004

**Prepared by the AFI RVSM Program Office [ARPO]
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AFI STRATEGY/ACTION PLAN FOR RVSM IMPLEMENTATION

EXECUTIVE SUMMARY

1. INTRODUCTION

It will be recalled that the Air Navigation Commission in approving APIRG Conclusion 13/85 relating to initial implementation of RVSM in the AFI Region, recommended that the Commission, prior to determination of a Target implementation date, make an Implementation Strategy available for approval. APIRG 14 mandated the AFI RVSM Task Force to develop a strategy for the implementation of RVSM in the AFI Region.

2. OBJECTIVES

To implement RVSM in the AFI Region the following objectives must be achieved:

- Develop an AFI RVSM Implementation Plan;
- Develop an AFI RVSM Implementation Program

3. RVSM IMPLEMENTATION PLAN

An AFI RVSM Implementation Plan shall be developed to set out the scope of the work needed to safely implement RVSM at the earliest realistic date, in an efficient manner and taking into account RVSM plans in adjacent Regions. Work completed by the AFI RVSM Task Force (ARTF) will be incorporated in the AFI Plan (See Attachment A)

4. RVSM PROGRAM MANAGEMENT

Successful and timely implementation of RVSM will be dependent on the establishment of a Program Office to manage the RVSM Program and appointment of dedicated staff with the required expertise. The Program Office will act as the AFI RVSM Implementation focal point, report to the ARTF and provide guidance to National Program Managers, who will in-turn report to the Program Office. (*See Attachment B*).

5 RVSM Program Management Plan

The AFI RVSM Task Force (ARTF) should direct the development of an RVSM Program Plan to implement the RVSM Plan. This should be accomplished in consultation with National Program Managers and other RVSM stakeholders. The Program Office shall develop a detailed Program Management Plan, which will provide a baseline and communication tool against which to monitor the cost, schedule and performance aspects of the RVSM Program. (See *Attachment B*).

5.1 National RVSM Program Manager (NPM)

States shall appoint National RVSM Program Manager. These managers will be responsible for the day-to-day management of the National RVSM Program, coordinate RVSM activities at national level and provide required inputs to the Program Office.

5.2 RVSM Program Structure

The RVSM Program will include many stakeholder activities up to and including the implementation of RVSM, as well as activities following implementation. Identified activities should be developed into a Work Schedule. The Work Schedule can be summarized into five sub-programs (See Attachment B).

5.2.1 Sub-Program 1 - RVSM Program Management.

The main deliverable is the RVSM Plan and full Stakeholder commitment to the implementation of RVSM at the agreed date. It includes program management activities throughout the required period, in particular progress monitoring and progress/status reports to States and the ARTF.

5.2.2 Sub-Program 2 - Aircraft Operations and Airworthiness

To ensure timely RVSM approvals for Aircraft Operations and Airworthiness by States, technical, operational and regulatory directives shall be available for airspace users. It will also assist and monitor the approval process. Aircraft height-keeping accuracy must be verified through the operation of a

height-monitoring infrastructure system. The monitoring program will provide the technical data to confirm that safety objectives are met.

5.2.3 Sub-Program 3 – Air Traffic Management (ATM)

This sub-program will ensure that all ATS provider units are well prepared and ready for the introduction of RVSM on the agreed date. Tasks should be identified to allow States to make airspace restructuring, introduce RVSM Procedures. Modify ATC systems, provide ATC Training and resolve legislative issues, etc.

5.2.4 Sub-Program 4 - RVSM Safety Assurance

RVSM safety assurance constitutes the safety assessments necessary prior to implementation, just after implementation and at the end of the RVSM Program to ensure that the agreed safety objectives are met. This includes amongst others the development of an agreed RVSM safety policy, and identifies the possible need for States to prepare RVSM safety cases.

5.2.5 Sub-Program 5 - Regional Monitoring Agency (RMA)

It is recognized that there is a requirement for monitoring of aircraft height keeping performance as part of RVSM implementation program. An AFI Regional Monitoring Agency needs to be established by the AFI RVSM Task Force to provide Safety Oversight Services in connection with implementation and continued safe use of RVSM within the designated airspace.

6 RVSM Program Schedule

A schedule for all the activities must be developed in conjunction with the various stakeholders and, in particular, the RVSM National Program Managers (NPM). The schedule will serve as the benchmark against which the program progress will be assessed. (See *Attachment C*)

7. AFI RVSM COST

It is the responsibility of stakeholders to identify and gain approval for their own budget and resource requirements.

8. CONCLUSION

Implementation planning should be progressed as a priority item. A program for implementation in the earliest possible time frame should be actively pursued, with implementation planning being carried out by the ARTF under the direction of APIRG. The RVSM Program should be fully coordinated by the Program Office for the entire area of future application, and should take full account of the work carried out by the ARTF.

Attachment A:

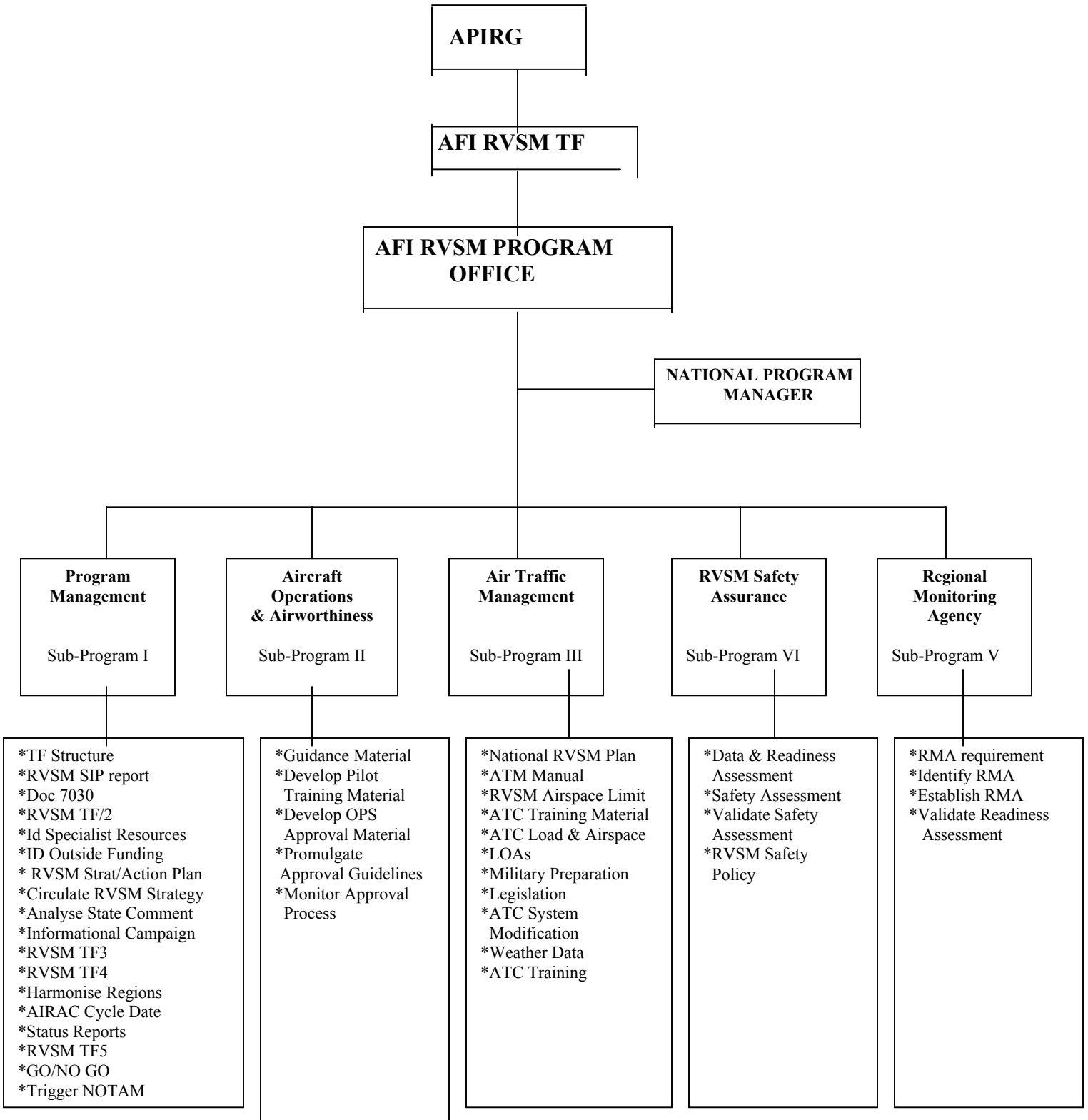
AFI RVSM IMPLEMENTATION ACTION PLAN				
ID	Description	Target Date	Status	Resources
	Program Management			
1	Agree on structure of TF to enable efficient handling of specialist technical tasks	21 November 2003	Completed	Secretariat Support Team: ASECNA South Africa, IATA, Nigeria, Tunisia
2	Consideration of the RVSM SIP Report	21 November 2003	Completed	RVSM/ITF2
3	RVSM/RNAV/RNP TF/2 Meeting	21 November 2003	Completed	RVSM/ITF2
4	Identify resources for performing specialist technical tasks	21 November 2003	Completed	RVSM/ITF2
5	Investigate methods of funding any outside assistance required	Ongoing	In progress.	ICAO/IATA
6	Finalize the RVSM Implementation Strategy/ Action Plan	31 December 2003	Completed	ICAO
7	Circulate RVSM Implementation Strategy/Action Plan for comments from States	5 January 2004	Completed 15 Dec '03	ICAO
8	Develop Doc 7030 amendment	31 March 2004	In Progress	ICAO
9	Obtain and analyze the comments from States on RVSM implementation Strategy/Action Plan	31 March 2004	In progress	States, ICAO RVSM/ITF3
10	Develop a regional RVSM informational Website	31 March 2004	In Progress	IACO/IATA/States
11	RVSM Seminar/Workshops/RVSM ITF3	19-22 April 2004	In Progress	ICAO
12	RVSM/ITF/4	June 2004	In progress	ICAO/RVSM ITF/4
13	Undertake coordination and harmonization of procedures with adjacent Regions	Ongoing	In progress	ICAO and AFI RMA
14	States to send AIC re RVSM Implementation intention	April 2004	In Progress	ICAO/States
15	Confirm target AIRAC implementation date (AIP Supplement to be published)	30 September 2004	In progress	Informal coordination Meeting/RVSM ITF/5
16	Prepare/maintain regional status report detailing RVSM implementation plans and circulate to States	Ongoing	In progress	ICAO
17	RVSM/ITF/5	Sept/October 2004	In progress	ICAO/RVSM ITF/5
18	Go/No-Go decision	30 September 2004	In Progress	Informal meeting of all Stakeholders/ ICAO/TF5
19	Publish Trigger NOTAM	25 November 2004	In progress	States

AFI RVSM IMPLEMENTATION ACTION PLAN				
ID	Description	Target Date	Status	Resources
	Aircraft Operations and Airworthiness			
20	Develop regional OPS & Airworthiness RVSM Guidance Material	21 November 2003	Completed	ICAO
21	Develop regional Pilot Training RVSM Guidance Material	31 March 2004	In Progress	States/ICAO/IATA
22	Develop AFI RVSM OPS Approval Process	30 July 2004	In progress	RMA/ ICAO/States
23	Promulgate on the guideline operational approval process	31 March 2004	In progress	States, ICAO
24	Monitor operator approval process	30 July 2004	In progress	RMA
	Air Traffic Management			
25	Develop National RVSM plan	31 March 2004	In progress	States, ICAO
26	Develop Regional ATC OPS Manual	31 March 2004	In progress	ICAO
27	Determine the limits of RVSM airspace	30 June 2004	In progress	States/ICAO
28	Develop Regional ATC Training Guidance Material	31 March 2004	In Progress	South Africa/ASECNA/ Nigeria
29	Evaluate the need for simulations to assess ATC workload and possible need for airspace/air route Sector changes	30 June 2004		Senegal/ASECNA/Nigeria South Africa
30	Identify issues to be addressed in Letters of Agreement	31 March 2004	In progress	Tunisia
31	Military aviation preparation	30 June 2004	In progress	States, ICAO
32	Develop National RVSM Legislation	30 June 2004	In progress	States, ICAO
33	States assess the impact of RVSM implementation on controller automation systems and plan for upgrades/ modifications	30 April 2004	In progress	States
34	Collect weather and turbulence data for analysis	31 June 2004	In progress	AFI RMA ICAO/States
35	States to conduct local RVSM training for air traffic controllers.	31 June 2004	In progress	States
	RVSM Safety Assurance			
36	Conduct preliminary data collection and readiness assessment	30 June 2004	In progress	RMA - ICAO
37	Complete RVSM Safety assessment	30 June 2004	In progress	AFI RMA/ICAO

AFI RVSM IMPLEMENTATION ACTION PLAN				
ID	Description	Target Date	Status	Resources
38	Validate safety assessment	30 June 2004	In progress	RVSM ITF/4
39	Develop AFI RVSM Safety Policy	30 June 2004	In progress	RVSM/ITF4
40	Evaluate options for setting up AFI RMA	21 November 2003	Completed	RVSM/ITF2
	Monitoring Agency			
41	Identify an AFI RMA	21 November 2003	Completed	RVSM/ITF/2
42	Establish an AFI RMA.	31 March 2004	In progress	South Africa/ICAO
43	Validate implementation readiness assessment	31 July 2004	In progress	ICAO, RMA

ATTACHMENT B

AFI RVSM PROGRAM



AFI RVSM IMPLEMENTATION SCHEDULE														
DELIVERABLE	2004					2005								
	JAN	F	M	A	M	J	J	A	S	O	N	D	JAN	F
PROGRAM MANAGEMENT														
RVSM Program Office	C													
RVSM Implementation Program	C													
AFI RVSM Master Plan	C													
RVSM Web-Site	C													
RVSM Promotion	O													
Doc 7030														
State RVSM Implementation Intention AIC														
GO/NO-Go Decision														
Publish Trigger NOTAM														
AIRCRAFT OPS & AIRWORTHINESS														
Aircraft System Development														
Pilot Training Guidance Material														
RVSM Approval Achievement														
System Architecture														
System Development														
System Operation														
AIR TRAFFIC MANAGEMENT														
RVSM Airspace Structure														
ATC Procedures														
ATS Provider														
ATC Training														
Flight Planning														
ATFM														
ATS Systems														

AFI RVSM IMPLEMENTATION SCHEDULE														
DELIVERABLE						2004						2005		
	JAN	F	M	A	M	J	J	A	S	O	N	D	JAN	F
Military Aviation														
Legislation														
OPS Data Collection														
Post Implementation														
RSMOPS Performance Review														
SAFETY ASSURANCE														
AFI Safety Policy														
Pre-Implementation Safety Assessment														
Post-Implementation Safety Assessment														
HEIGHT MONITORING														
Regional Monitoring Agency (RMA)														
RVSM Aircraft Database														
Height Deviation														
Readiness Assessment														

C = Completed
 O = Ongoing
