WORKSHOP EXERCISE

Workshop on the development of
National Performance Framework
6 – 10 Dec 2010

Characteristics of The Industry

- High-end tourism-based /seasonal
- Single International Airport
- Geographically remote (slot times)
- Projected Traffic Growth = 5%
- Oceanic Airspace

Air Navigation Service Provider

- SCAA is a statutory board that provides air navigation services for Seychelles FIR – regulated by the Safety Regulation Division of the SCAA
- Air Traffic Services include Aerodrome, procedural Approach and Area control

Major Stake-holders

- Airlines (in particular Air Seychelles)
- Neighbouring ACCs /FIRs
- General Aviation
- Military
- ICAO
- IATA

Problem Definition

- Terrain (western sector dead; VHF /Navaids coverage limited; MSA high)
- HF comms propagation issues
- Limited surveillance in FIR (ADS-C only)
- Aerodrome operating minima > chance of landing
- Large Route Spacing & large separation standards applied
- Operations in a single runway environment
- Early morning peak hour (Bunching)

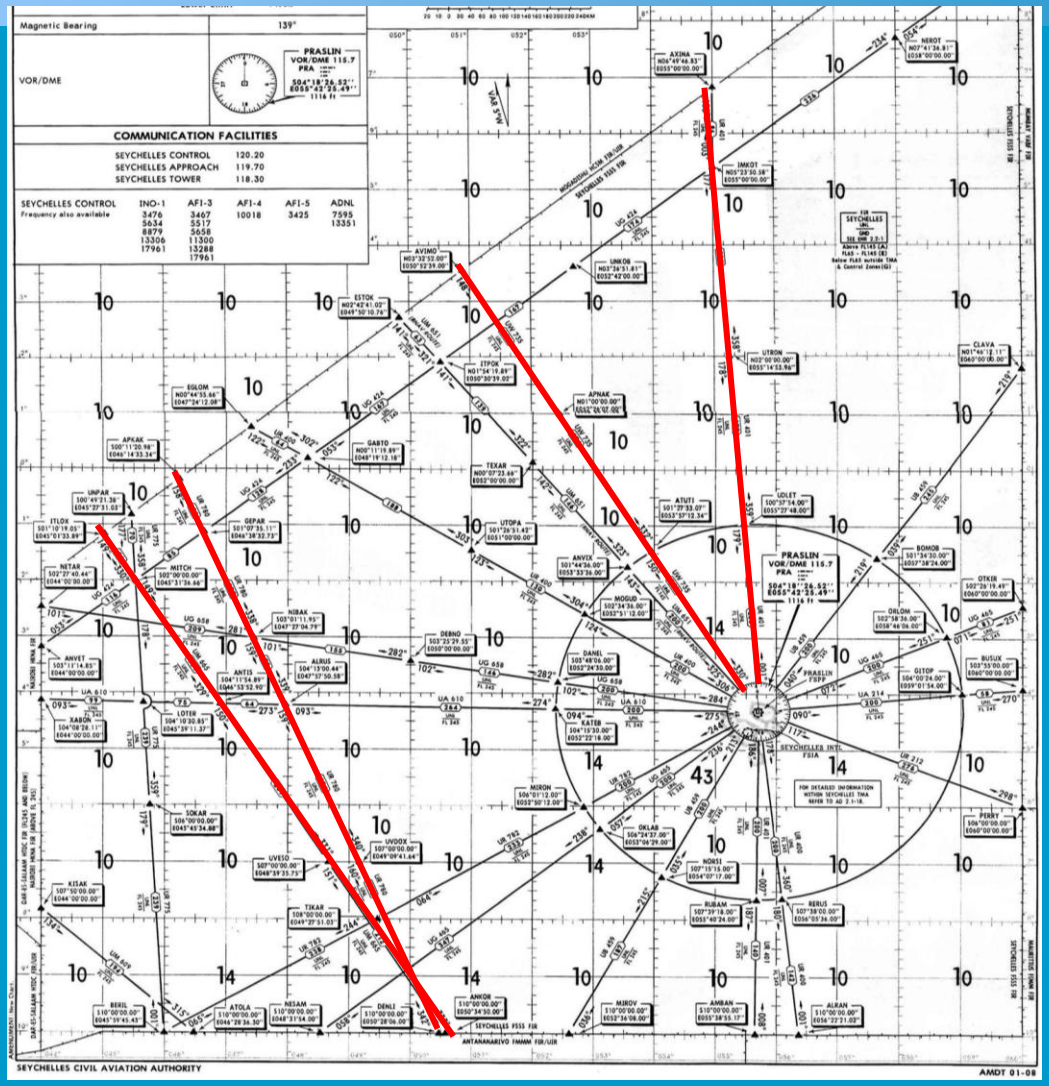
Performance based National Air Navigation Plan

The Seychelles PBN Roadmap is guided by the AFI Regional Roadmap for PBN and ICAO PBN Manual (ICAO Doc. 9613) and relevant SARPs.

The primary driver for this plan is to increase safety, air space capacity, enhance services through technology in consultation with relevant stakeholders.

The Seychelles Roadmap also supports national and international interoperability and global harmonization

Major Traffic Flows



Performance based National Air Navigation Plan

- Optimize use of existing RNAV SIDs and STARs
- Introduce Surveillance capability (ADS-B /Multilateration)
- Reduce lateral and longitudinal separation
- Upgrade FDPS to meet PANS/ATM requirement for new flight plan format

Performance Framework Forms

NATIONAL PERFORMANCE OBJECTIVES
Optimize use of existing RNAV SIDs and STARs

Performance Benefits	
Environment	reduction in fuel consumption and emissions.
Efficiency	reduce pilots' workload due to better airspace design
Capacity	increase in terminal airspace capacity
Safety	reduce ATCO interventions due to better airspace design

Performance Measurements	
Metrics	1. % of time saved during an approach
	2. % use of RNAV SIDS/STARs utilized per 100 mvts
	2. % of RNAV approved aircraft 3. No of operations per hour
	3. No. of incidents

Strategy - Short-term 2008 - 2012

ATM OC Components	Projects /Tasks	Timeframe Start /End	Responsibility	Status
AOM AO	Terminal Airspace	2008 - 2012		

	Projects /Tasks	Time Frame Start /End	Responsibility	Status
	Engage Stakeholders	2008 - 2010	ANS /SR	On-going
	Survey on equipped aircraft	2010	SR	completed
	Creation of Databases	2011	SR/ANS/IT	
	Collection of Statistics on usage	2010 – 2012+	ANS	On-going
Risk Management	Risks Factors: Lack of funding; delay in aircraft equipage; insufficient database; lack of HR			
	Risk Mitigation: identification different funding sources; involvement of aircraft operators in the decision making; recruitment of a statistician			
Linkage to GPIs	GPI/5: area navigation and required navigation performance, GPI/8: collaborative airspace design and management, GPI/9: situational awareness, GPI/10: terminal area design and management, GPI/11: RNP and RNAV SIDs and STARs, GPI/21: navigation systems			

Performance Framework Forms

NATIONAL PERFORMANCE OBJECTIVES

Upgrade FDPS to meet PANSATM requirement for new flight plan format

Performance Benefits	
Environment	reduction in fuel consumption and emissions.
Efficiency	• ability to make maximum use of aircraft capabilities • ability of aircraft to conduct flights more closely to their preferred trajectories • facilitate utilization of advanced technologies thereby increasing efficiency • optimized demand and capacity balancing through the efficient exchange of information
Safety	enhance safety through ATCOs more informed decisions
Cost-effectiveness	Reduction in fuel costs Reduction comms cost
Performance Measurements	
Metrics	1. Number of hours of reduced flight time
	2. Number of incidents
	3. Cost savings (Cost centres)

Strategy Short-Term (2010 – 2012)				
ATM OC Components	Projects /Tasks	Timeframe Start /End	Responsibility	Status
AUO SDM DCB	1. Conduct impact assessment on current system; define requirements; identify solutions 2. Liaise with manufacturer for system solution 3. Testing of solution delivery 4. Transition Planning – Phase 1: identify key transition criteria *All training completed* *All documentation produced and distributed* *Operational interfaces checked with adjacent ACCs* *Transition Rehearsals complete on operational system* *Produce a transition plan – walk thru' the plan* *Produce and validate reversion plan – walk thru' the plan* *Operation readiness demonstration* 5. Transition Phase 2 – Transit into operation 6. Transition Phase 3 – Airspace users implementation 7. Closure Phase – Filing of new flight plans	Jan – Dec 2010 Jan 2011 – Dec 2011 Sept – Dec 2011 Jan – Mar 2012 Apr – Jun 2012 July – 14 Nov. 2012 15 Nov 2012	ANS / CNS SCAA / Supplier SCAA SCAA / Supplier Air space users All	Completed On-going

Risk Management	Risks Factors: Lack of funding; delay in solution production; delay in air space user readiness
	Risk Mitigation: identification different funding sources; sourcing of alternate suppliers; involvement of aircraft operators in transition planning;
Linkage to GPIs	GPI/5 RNAV and RNP (Performance-based navigation) GPI-12 Functional integration of ground systems with airborne system GPI/18 Aeronautical Information

Performance Framework Forms

NATIONAL PERFORMANCE OBJECTIVES

Introduce surveillance capability in Seychelles FIR (ADS C/ADS-B /Multi-lat)

Performance Benefits	
Efficiency	•ability to allocate aircraft their preferred trajectories • optimized demand and capacity balancing through the efficient exchange of information • decrease in ATCOs & pilots intervention
Safety	• ability to monitor aircraft positions and trajectories • enhance safety by use of modern capabilities onboard aircraft • increased situational awareness & timely conflict management
Performance Measurements	
Metrics	1. Number of incidents
	2. Number of alerting occurrences due to unreliability of two way communication establishment

Strategy Short-term (2009-2012)				
ATM OC Components	Projects /Tasks	Time Frame Start /End	Responsibility	Status
AOM, AUO,SDM,CM	Implementation of ADS C	2009 - 2010	ANS /CNS	Completed
	Implementation of ADS B/Multilat • Site survey (coverage analysis, interconnection links availability, power , accessibility to sites) • Scope definition • Aircraft equipage survey • Cost benefit analysis • Procurement process •Manufacturing Phase •Installation phase •Training •Commissioning	 Mar - Dec 2010 Nov-Dec 2010 1 – 31st Jan 2011 Jan – Feb 2011 Mar – Sept 2011 Oct 2011 – Feb 2012 Mar – June 2012	CNS	On-going
Risk Management	Risks Factors: Lack of funding; coverage limitation, availability of suitable sites, high operational costs			
	Risk Mitigation: identification of different funding sources; make available transponders for aircraft.			
Linkage to	GPI/5: performance-based navigation; GPI/7: dynamic and flexible ATS route management; GPI/8:			

The End

Any questions?