

WORKSHOP EXERCISE FOR NAMIBIA

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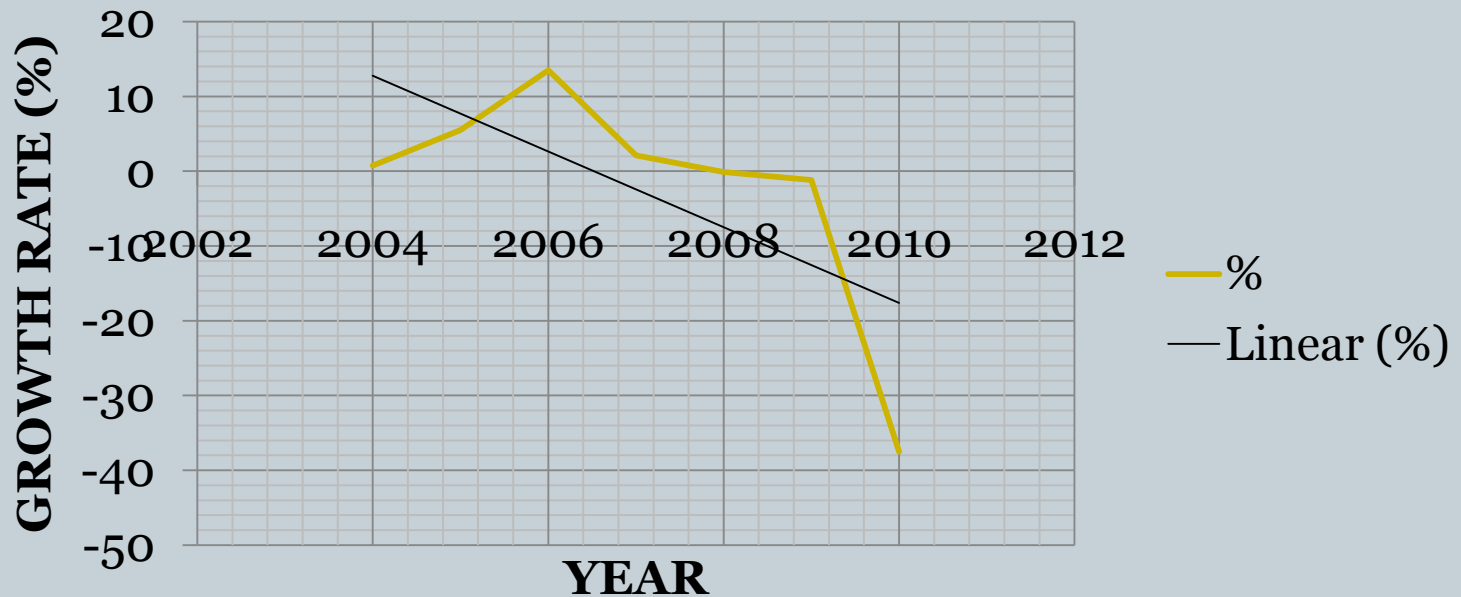
- **Workshop on the development of National Performance Framework to achieve a Global ATM System**

Nairobi, Kenya.6th -10th DECEMBER 2010

CHARACTERISTICS OF THE INDUSTRY

CURRENT AND PROJECTED AIR TRAFFIC GROWTH

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CURRENT AND PROJECTED AIR TRAFFIC GROWTH.

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- Total F.I.R. movements has shown a decline during 2004 to 2010.(Fig 1).
- Traffic is expected to grow at 2.4% per year.

CHARACTERISTICS OF THE INDUSTRY

CNS/ATM, AIM, MET

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- **NAVAIDS** - VOR/DME(4) , GNSS and NDB is Decommissioned)
- **COMMUNICATIONS** - VHF (air to air) covering the whole country (Namibian FIR)
 - HF (available but not in use)
 - AFTN (GROUND TO GROUND)
 - VSAT (GROUND TO GROUND)
- **SURVEILLANCE** - RADAR
 - (PSR/SSR)/Multilateration /ADS-B
 - AIS equipment infrastructure for automation (to be imported)

CHARACTERISTICS OF THE INDUSTRY

CNS/ATM, AIM, MET

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- MET and AIM also fall under DCA
- Major airports are operated by Namibia Airports Company as autonomous entity.
- Heavy traffic flow is within the Winhoek-TMA
- 95% of Namibian airspace land

Air Navigation Service Provider

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- The Directorate of Civil Aviation is the statutory board that provides air navigation services for Namibia FIR under the umbrella of Ministry of Work and Transportation and Financed by Ministry of Finance.
- ATC services include Aerodrome, Approach and Area control.

MAJOR STAKE HOLDERS /PARTNERS/ AIRSPACE USER



- Air Namibia (national airline), BA, SAA, SA Express, DELTA, BER, DTA, VIR, BAW, DLH,
- Business aviation – West Air, Bay Air, Wings Over Africa, Trustco, Sefofane Air, Scenic Air, Court Helicopter, Albatroos Air, EMED, MDX, EXD, CLX,
- Neighboring ACC
- Military -NAF

PROBLEM DEFINITION

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- VOR/DME - Range problem due to limited number of stations and topographical limitations.
- Available few not strategically positioned
- Limited com & surveillance over certain are

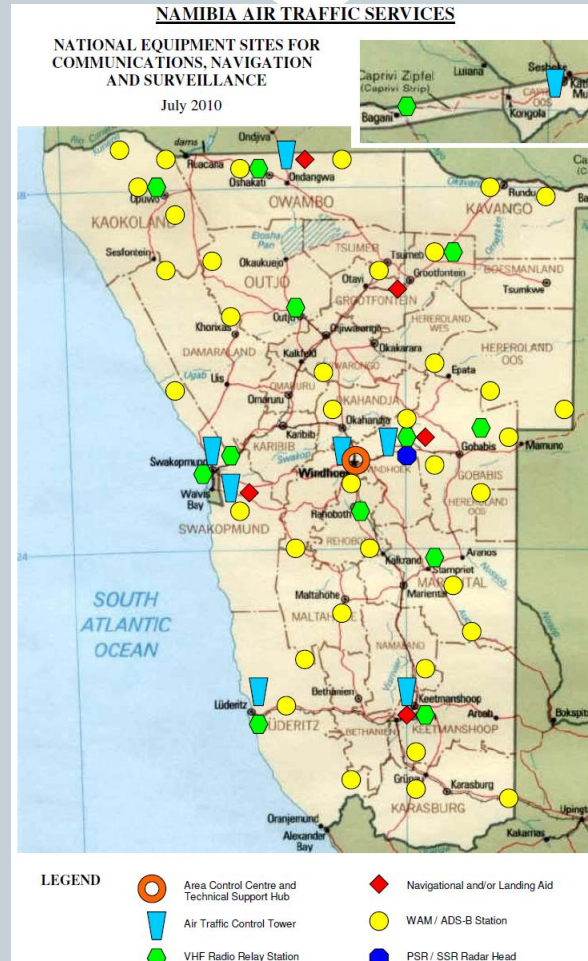
PERFORMANCE BASED NATIONAL AIR NAVIGATION PLAN

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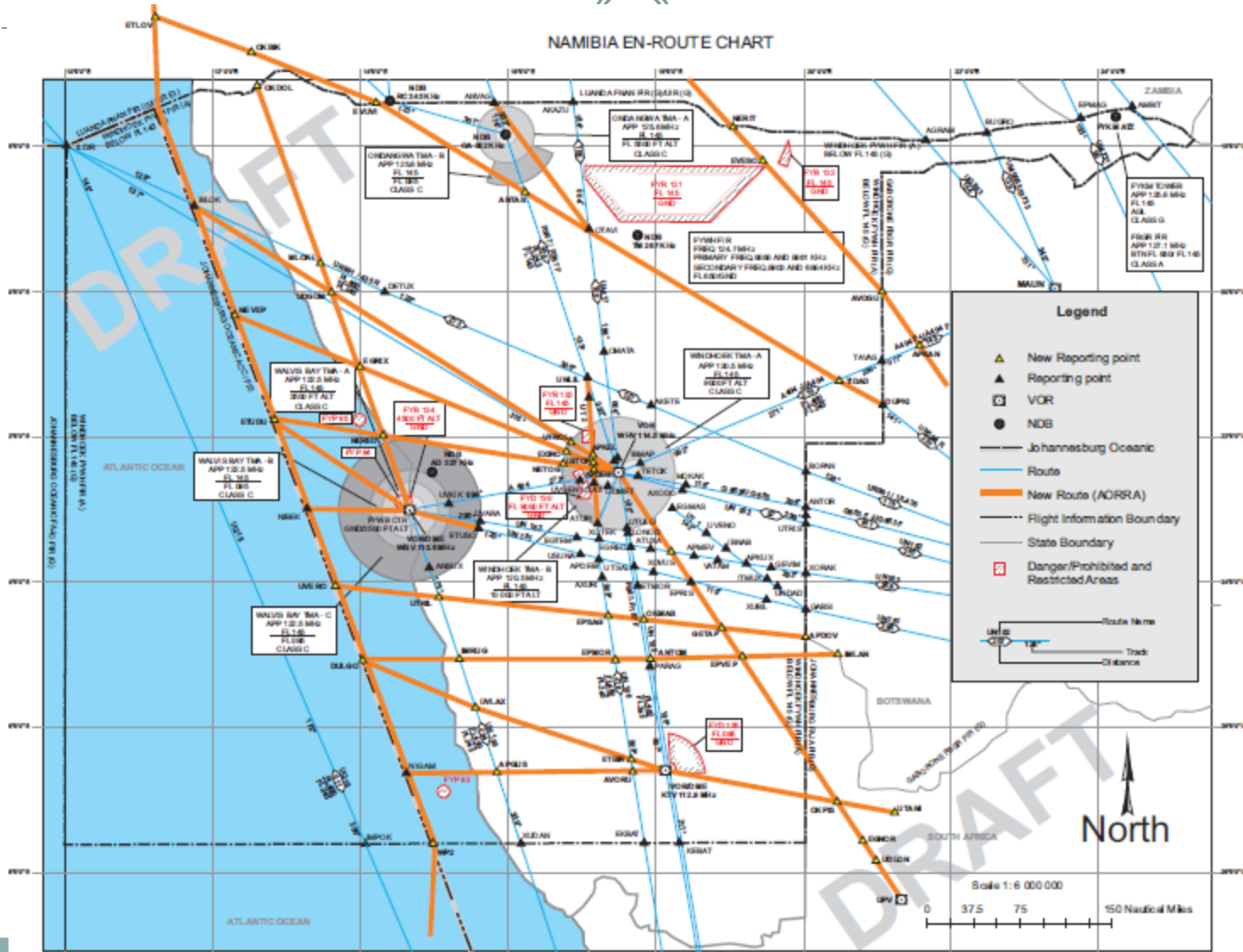
- Implementation of RNAV/GNSS/ADS-B, MULTILATERATION and PSR/SSR RADAR system,
- VOR/DME at Ondangwa and Walvisbay TMAs; and at Grootfontein aerodrome
- Major traffic flows: towards East-North-South
- RNAV-10 ROUTES. GNSS approach is part of the GPS service and is established at Namibia, since 2008.
- RNAV -SIDs/STARs planned to be implemented in the FIR in 2011.

PERFORMANCE BASED NATIONAL AIR NAVIGATION PLAN

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PERFORMANCE BASED NATIONAL AIR NAVIGATION PLAN



RISK MANAGEMENT

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- Political Issues to obtain financial support.
- Fly-ability of RNAV SIDs and STARs for aircraft -
Conduct of flight simulation.
- Misunderstanding of Flow Management Concept by pilots which could lead to safety concerns –
- Numerous engagement with airline operators and pilots.
- DCA to provide safety monitoring services for implementation.

THANK YOU!!!!!!!!!!!!!!