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Third Meeting of the Air Navigation System Implementation Group (ANSIG/3)

Cairo, Egypt, 2-4 July 2018

United Arab Emirates



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Outline

- **Brief on the UAE National ASBU Implementation Plan**
- **Overall Progress in ASBU Implementation**
- **Success Story**
- **Lessons Learned**
- **Challenges – ASBU Implementation**
- **Recommendations**
- **Outlook 2020**



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UAE National ASBU Implementation Plan

- UAE ASBU Implementation plan is contained within the UAE ATM Strategic Plan.
- Monitored and updated via NASAC WG-4
- Currently going through third iteration of update
- Available on the GCAA website
<https://www.gcaa.gov.ae/en/epublication/pages/standalonegm.aspx>



Overall Progress in ASBU Implementation

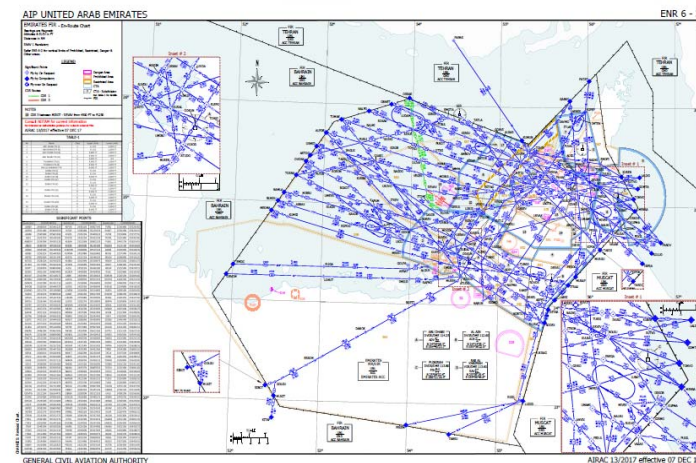
- B0-APTA – Fully Implemented December 2017
- B0-SURF – A-SMGCS Level 1 – Fully Implemented – Level 2 – 67% Implemented
- B0-ACDM – In progress (67% expected Q4 2018)
- B0-FICE – 98% Implemented (100% expected Q2 2019)
- B0-DATM – Fully Implemented
- B0-AMET – Fully Implemented
- B0-FRTO – Partially Implemented – In progress
- B0-NOPS – Partially Implemented – In progress
- B0-ACAS – Fully Implemented
- B0-SNET – Fully Implemented
- B0-CDO – Fully Implemented
- B0-CCO – Fully Implemented



Success Story

UAE Airspace Restructuring Project – Phase 3

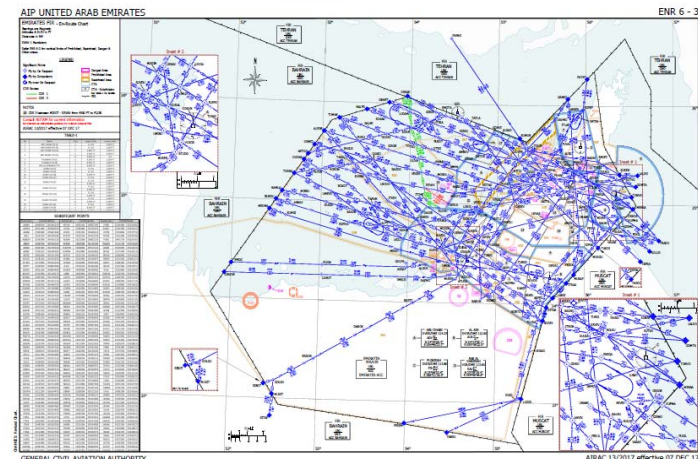
- Increase UAE Airspace capacity to meet the forecasted air traffic demand for 2020 - 2035.
- Increased access to all UAE airports.
- Improved efficiency for both airspace users and Air Navigation Service Providers.
- Reduction in the environmental impact of the increasing traffic through the provision of more effective ATM operations.





UAE Airspace Restructuring Project – Phase 3

- Project Implementation Period – 18 months
- Number of Project Deliverables – 50 deliverables
- Number of Workshops/Meetings – over 200
- Actual Man hours for design development – over 120,000 hours (6 * 8)
- Number of aviation stakeholders involved – 26
- Number of UAE ANSPs involved – 6
- Number of Project Representatives – over 150
- Number of ATCOs Trained – 250
- Creation of Key Stakeholder Transition Plan Development Team





UAE Airspace Restructuring Project – Phase 3

- Full PBN with RNAV 1 (GNSS).
- Introduction of 30 new Routes.
- Allocation of 407 new 5LNC and Alphanumeric Waypoints.
- Incorporation of over 200 Instrument Flight Procedures (IFPs).
- 1000+ changes related to 312 new/modified route segments.
- Upload of 1741 route segments related to 115 new SIDs and 111 new STARs.
- Fast Time Simulation results highlighted fuel savings of over 15m USD within the first year after implementation & 100,000 Mt of CO² saving.



Lessons Learned for Success

UAE Airspace Restructuring Project – Phase 3





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Challenges – ASBU Implementation

- Translation of ASBU Concepts to National Concepts
- Varying Political commitment across States
- Airports infrastructure complexity and restrictions
- Timely allocation of funds
- Regional Harmonization and Common Framework for Cross-Border Collaboration.
- Neighboring ATS unit compatibility
- Airspace Users Readiness
- Cyber Security Challenges



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Recommendations

ICAO is invited to promote:

- Enhancement of stakeholder collaboration and encouragement for key strategic planning & execution to ensure success.
- Prioritise and develop mechanisms to promote and support joint regional investments.
- Commitment to joint regional common priorities and cross-border projects.
- Adaptability and openness to support dynamic regional ATM changes.
- Encourage States to develop regulatory framework for the standardisation of information sharing platforms that subsequently complement regional and global framework.
- Lessons Learned from the UAE Airspace Restructuring Project.



Outlook 2020

(Status of ASBU Block 0 Modules by 2020)

Module	Module Title	Status by 2020				Remarks
		FI	PI	NI	N/A	
B0-APTA	Optimization of Approach Procedures including vertical guidance	x				
B0-WAKE	Increased Runway Throughput through Optimized Wake Turbulence Separation	x				
B0-RSEQ	Improve Traffic flow through Runway Sequencing (AMAN/DMAN)	x				
B0-SURF	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)	x				
B0-ACDM	Improved Airport Operations through Airport-CDM	x				
B0-FICE	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration	x				



Outlook 2020

(Status of ASBU Block 0 Modules by 2020)

Module	Module Title	Status by 2020				Remarks
		FI	PI	NI	N/A	
B0-DATM	Service Improvement through Digital Aeronautical Information Management	X				
B0-AMET	Meteorological information supporting enhanced operational efficiency and safety	X				
B0-FRTO	Improved Operations through Enhanced En-Route Trajectories				X	<i>Not Applicable for the UAE – Regional Implementation required</i>
B0-NOPS	Improved Flow Performance through Planning based on a Network-Wide view		X			<i>UAE NOC planned for 2025</i>
B0-ASUR	Initial capability for ground surveillance	X				
B0-ASEP	Air Traffic Situational Awareness (ATSA)	X				



Outlook 2020

(Status of ASBU Block 0 Modules by 2020)

Module	Module Title	Status by 2020				Remarks
		FI	PI	NI	N/A	
B0-OPFL	Improved access to optimum flight levels through climb/descent procedures using ADS-B				X	<i>ADS-B Mandated from 2020 however implementation required on a regional level</i>
B0-ACAS	ACAS Improvements	X				
B0-SNET	Increased Effectiveness of Ground-Based Safety Nets	X				
B0-CDO	Improved Flexibility and Efficiency in Descent Profiles (CDO)	X				
B0-TBO	Improved Safety and Efficiency through the initial application of Data Link En-Route	X				
B0-CCO	Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCO)	X				



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Thank you