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

Cairo, Egypt, 2-4 July 2018

I.R. of Iran

Iran Airports and Air Navigation Company
(**IAC**)

Outline

- Brief on the Iran National ASBU Implementation Plan
- Status of ASBU Implementation
- Lessons Learned
- Challenges
- Recommendations
- Outlook 2020

Status of ASBU Implementation

Status of ASBU Implementation

B0 – APTA: Optimization of Approach Procedures including vertical guidance				
Elements	**Applicability**	**Status**	**Action Plan/Timelines**	**Remarks**
States' PBN Implementation Plans	FIR	PBN Plan Developed and approved Completed	Developed	Fleet Assessment to be done
LNAV/VNAV	OIII 29L OIIE 29R OIZH OIKJ	29L OIII, 29R OIIE, OIZH and OIKJ are Completed	100% by DEC.2018	RAIM Prediction is not available.
	OIMM OIFM OITT OISS OIYY OIKB			
WGS84	FIR	Completed		
Training of ATCOs	ATC relevant staffs	in progress	100% by Dec. 2018	

Status of ASBU Implementation

B0-SURF: Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)				
Elements	**Applicability**	**Status**	**Action Plan/Timelines**	**Remarks**
A-SMGCS Level 1	---	---	---	---
A-SMGCS Level 2	OIII	In Progress	Dec 2018	---
	OIIE	In Progress	Dec 2019	

Status of ASBU Implementation

B0 – ACDM: Improved Airport Operations through Airport-CDM				
Elements	**Applicability**	**Status**	**Action Plan/Timelines**	**Remarks**
A-CDM	OIII OIIE	Plan Plan	Dec 2019 Dec 2019	---

Status of ASBU Implementation

B0 – FICE: Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration				
Elements	Applicability	Status	Action Plan/Timelines	Remarks
AMHS capability	Tehran AMHS/AFTN Centre	In Progress	July 2018	
AMHS Impl. /interconnection	Tehran AMHS/AFTN Centre	planned	All local ATS users (Aerodrome, Airline, ATS/Military units) and interconnect with international AMHS link with adjacent AMHS centers (Ankara, Bahrain, Kuwait, Muscat, Karachi, Abu-Dhabi, Damascus) by Dec 2018	
Impl. of AIDC/OLDI between adjacent ACCs	Between Tehran ACC and adjacent ACCs (Ankara, UAE, Muscat, Kuwait, Bahrain)	planned	Dec 2019	

Status of ASBU Implementation

B0 – DATM: Service Improvement through Digital Aeronautical Information Management				
Elements	Applicability	Status	Action Plan/Timelines	Remarks
AIXM	IRAN Aerodromes	planned	Dec 2018 (SAT)	---
	Tehran FIR	planned	Dec 2018 (SAT)	
eAIP	Tehran FIR	planned	Dec 2018	
Digital NOTAM	Tehran FIR	planned	Dec 2019	
WGS-84	ENR AD TMA GUND	Implemented	2013	
eTOD	Area 1 & 4	Implemented	Dec 2014	
	Area 2 & 3		Oct 2016	
QMS for AIM		Implemented	Dec 2008	

Status of ASBU Implementation

B0 – AMET: Meteorological information supporting enhanced operational efficiency and safety				
Elements	**Applicability**	**Status**	**Action Plan/Timelines**	**Remarks**
Secure SADIS FTP	Tehran FIR	In Progress	DEC 2019	
QMS for MET	Tehran FIR	Implemented	Dec 2015	
WAFS-IAVW-TCW forecast message	TEHRAN FIR	Implemented	Dec 2016	
Aerodrome Warning	TEHRAN FIR	Implemented	Dec 2016	
Wind Shear Warning and Alerts	OIIE	In progress	Dec 2019	
SIGMET information	TEHRAN FIR	Implemented		

Status of ASBU Implementation

B0 – FRTO: Improved Operations through Enhanced En-Route Trajectories				
Elements	**Applicability**	**Status**	**Action Plan/Timelines**	**Remarks**
Establishment of Airspace planning team	En-Route Trajectories	partially Implemented	By Dec 2017	Military coordination & Surveillance coverage expansion to FL160 is required
PBN Implementation	Tehran FIR		By Nov 2018	
Flexible use of airspace (FUA)	Tehran FIR	Planned	Dec 2018	
Flexible routing	Tehran FIR	In progress	Dec 2019	

Status of ASBU Implementation

B0 – ACAS: ACAS Improvements				
Elements	**Applicability**	**Status**	**Action Plan/Timelines**	**Remarks**
ICAO Regulation on carriage of ACAS (TCAS v7.1)	Tehran FIR	in progress	By 1 JAN 2017 for aircraft performing commercial air transport	ICAS 106

Status of ASBU Implementation

B0 – CDO: Improved Flexibility and Efficiency in Descent Profiles (CDO)				
Elements	**Applicability**	**Status**	**Action Plan/Timelines**	**Remarks**
PBN STARs	OIIE	Implemented	---	
	OIII	In progress	Dec 2018	
	OIMM	In progress	Dec 2018	
	OIFM	In progress	Dec 2018	
	OISS	In progress	Dec 2018	
	OIKB	In progress	Dec 2018	
	OIZH	In progress	Dec 2018	
	OITT	In progress	DEC 2018	
	OIYY	In progress	Dec 2018	
International aerodromes/ TMAs with CDO	Tehran TMA Mashhad TMA Isfahan TMA Shiraz TMA Bandar Abbas TMA OIZH CTR OITT CTR OIYY CTR	In progress	DEC 2019	

Status of ASBU Implementation

B0 – CCO: Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCO)				
Elements	**Applicability**	**Status**	**Action Plan/Timelines**	**Remarks**
PBN SIDs	All international airports	In progress	DEC 2018	
International aerodromes/ TMAs with CCO	Tehran TMA Mashhad TMA Isfahan TMA Shiraz TMA Bandar Abbas TMA OIZH CTR OITT CTR OIYY CTR	In progress In progress In progress In progress In progress In progress In progress In progress	NOV 2018 DEC 2019 DEC 2019 DEC 2019 DEC 2019 DEC 2019 DEC 2019 DEC 2019	

Status of ASBU Implementation

B0-*TBO*: Improved Safety and Efficiency through the initial application of data link and SATVOICE En-Route				
Elements	**Applicability**	**Status**	**Action Plan/Timelines**	**Remarks**
Continental CPDLC	Tehran FIR	Plan	Dec. 2019	
SATVOICE	Tehran FIR	Plan	Dec. 2019	
FICE (Main dependencies)	Tehran FIR	Plan	Dec. 2019	

Status of ASBU Implementation

B0-*ASUR*: Initial Capability for Ground Surveillance				
Elements	**Applicability**	**Status**	**Action Plan/Timelines**	**Remarks**
ADS-B	Tehran FIR	In progress For 20 stations	Dec. 2019	National procedure required
MLAT	OISS TMA	Plan	Dec. 2019	National procedure required

Status of ASBU Implementation

B0-*NOPS*: Improved Flow Performance through Planning based on a Network-Wide view				
Elements	**Applicability**	**Status**	**Action Plan/Timelines**	**Remarks**
Capacity determination	OIII, OIIE, OIMM, OIFM, OISS Airports and TMAs	OIII, OIIE in progress	Dec. 2019	
	Enroute	Planned	DEC 2020	
Capacity/demand balancing	OIII, OIIE, OIMM, OIFM, OISS Airports and TMAs	Planned	Dec. 2019	
	Enroute		DEC 2020	
Airport procedure	OIII, OIIE, OIMM, OIFM, OISS Airports and TMAs	Planned	Dec. 2019	
IFPS Implementation	Departures	In progress	Sep 2018	
	Arrivals	Planned	Jan 2019	
	Transit	Planned	DEC 2019	
Central ATFM unit	Tehran FIR	Plan	DEC 2020	
Cooperation with EU ATFMU	Tehran FIR	Plan	DEC 2020	

Other ASBU Block 0 Modules (priority 2) Implemented by the State

Module	Module Title	Status		Remarks
		Yes	No	
B0-WAKE	Increased Runway Throughput through Optimized Wake Turbulence Separation		NO	
B0-RSEQ	Improve Traffic flow through Runway Sequencing (AMAN/DMAN)		NO	
B0-ASUR	Initial capability for ground surveillance		NO	
B0-ASEP	Air Traffic Situational Awareness (ATSA)		NO	
B0-OPFL	Improved access to optimum flight levels through climb/descent procedures using ADS-B		NO	
B0-SNET	Increased Effectiveness of Ground-Based Safety Nets		NO	
B0-TBO	Improved Safety and Efficiency through the initial application of Data Link En-Route		NO	

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	✓				For PI and NI please specify completion date
B0-WAKE	Increased Runway Throughput through Optimized Wake Turbulence Separation	✓				For PI and NI please specify completion date
B0-RSEQ	Improve Traffic flow through Runway Sequencing (AMAN/DMAN)	✓				For PI and NI please specify completion date
B0-SURF	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)	✓				For PI and NI please specify completion date
B0-ACDM	Improved Airport Operations through Airport-CDM	✓				For PI and NI please specify completion date
B0-FICE	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration	✓				For PI and NI please specify completion date

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	✓				For PI and NI please specify completion date
B0-AMET	Meteorological information supporting enhanced operational efficiency and safety	✓				For PI and NI please specify completion date
B0-FRTO	Improved Operations through Enhanced En-Route Trajectories	✓				For PI and NI please specify completion date
B0-NOPS	Improved Flow Performance through Planning based on a Network-Wide view	✓				For PI and NI please specify completion date
B0-ASUR	Initial capability for ground surveillance	✓				For PI and NI please specify completion date
B0-ASEP	Air Traffic Situational Awareness (ATSA)	✓				For PI and NI please specify completion date

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	✓				For PI and NI please specify completion date
B0-ACAS	ACAS Improvements	✓				For PI and NI please specify completion date
B0-SNET	Increased Effectiveness of Ground-Based Safety Nets	✓				For PI and NI please specify completion date
B0-CDO	Improved Flexibility and Efficiency in Descent Profiles (CDO)	✓				For PI and NI please specify completion date
B0-TBO	Improved Safety and Efficiency through the initial application of Data Link En-Route	✓				For PI and NI please specify completion date
B0-CCO	Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCO)	✓				For PI and NI please specify completion date

Lessons Learned

- Implementation of ASBU blocks require close collaboration of ATM community from first step of planning to the final steps.
- Preparation of the action plan in detail is a prerequisite for successful implementation.
- ATC Under planning and procedure designer.

Challenges

- Comprehensive training is required for operational personnel.
- The heavy workload of flight inspection of ASBU procedure designed.
- Reorganization of airspace to optimize ASBU implementation benefits.
- Data validation and Flight validation
- Military coordination

Recommendations

- Close cooperation of neighboring states according to regional plan is encouraged.
- Sharing and exchanging of experiences during implementation can facilitate the progress of plan and reduces implementation time and costs.

Thank you