EUROCONTROL

LSSIP 2019
BOSNIA & HERZEGOVINA
LOCAL SINGLE SKY IMPLEMENTATION

Level 1 - Implementation Overview

FOREWORD

"We manage a seamless European airspace by linking together the elements of the European air traffic management system. Focusing on performance of the European network, we ensure that flights reach their destination safely, on time, with the least possible impact on environment and in a cost-efficient way".

With this mission, as Director NM, I must ensure to develop and operate effectively and efficiently the air traffic management network in Europe and beyond, to meet current and future airspace and ground capacity needs, in full partnership with all operational stakeholders.

In particular, one of the NM activities through the Infrastructure Division, is to focus on the planning and monitoring of the European ATM implementation of the SES objectives at the local level according to EU legislation.

For more than 26 years, the Local Single Sky ImPlementation (LSSIP) documents are expressing yearly the commitment of civil and military national organisations (Regulators and National Supervisory Authorities), Air Navigation Service Providers and Airport Operators, towards the implementation of the European ATM Master Plan (Level 3).

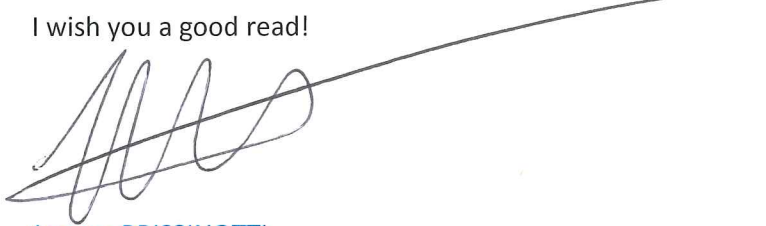
These documents provide an extensive and harmonised picture, for the benefit of the ATM community at large, of how all ECAC States as well as States having a Comprehensive Agreement with EUROCONTROL, and stakeholders concerned, are progressing in planning and deploying the mature elements of the European ATM Master Plan and the European aviation policies.

The reliability and quality of the data provided by the national stakeholders is of such a high quality that it allowed, for the fifth consecutive year, for the information in the LSSIP documents to constitute the sole source of information for the development of ICAO's Aviation System Block Upgrades (ASBUs) Implementation Monitoring Report in the ICAO EUR Region. EUROCONTROL undertakes this work, on behalf of ICAO, for all 55 ICAO/EUR States in accordance with the Global Air Navigation Plan (GANP).

In addition, EUROCONTROL is developing efficient practices to avoid unnecessary duplication of reporting. We are cooperating with the SESAR Deployment Manager, the SESAR Joint Undertaking, the European Defence Agency and NATO on optimising the reporting mechanisms for relevant stakeholders by collecting some of the information needed on their behalf through the LSSIP process.

I would like to thank all the stakeholders for their engagement and substantial effort spent in contributing to the production of this LSSIP document. I see this as a proof of commitment to the principles of transparency and partnership, to the benefit of the entire ATM community!

I wish you a good read!



Iacopo PRISSINOTTI
Director NM – Network Manager
EUROCONTROL

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LSSIP Documents	https://www.eurocontrol.int/service/local-single-sky-implementation-monitoring
Master Plan Level 3 – Plan Edition 2019	https://www.eurocontrol.int/publication/european-atm-master-plan-implementation-plan-level-3-2019
Master Plan Level 3 – Report Year 2019	https://www.eurocontrol.int/publication/european-atm-master-plan-implementation-report-level-3-2019
European ATM Portal	https://www.atmmasterplan.eu/
STATFOR Forecasts	https://www.eurocontrol.int/statfor
National AIP	https://eaip.bhansa.gov.ba/

APPROVAL SHEET

The following authorities have approved all parts of the LSSIP Year 2019 document and the signatures confirm the correctness of the reported information and reflect the commitment to implement the actions laid down in the European ATM Master Plan Level 3 (Implementation View) – Edition 2019.

Stakeholder / Organisation	Name	Position	Signature and date
BHDCA	Željko TRAVAR	Acting Director BHDCA	18.03.2020.
BHANSA	Davorin PRIMORAC	Director of BHANSA	17.03.2020
MoD	Sifet Podžić	Minister of Defence	17.03.2020
Airport Sarajevo	Armin KAJMAKOVIĆ	General Manager	17.03.20.

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Executive Summary

National ATM Context

Member State of:

[1]

Bosnia and Herzegovina is an ICAO, ECAC, EUROCONTROL, ECAA and JAA Member State.

Bosnia and Herzegovina ratified the European Common Aviation Area (ECAA) Agreement and signed a working arrangement (WA) with EASA thus accepting the obligation to implement European Union regulations in the civil aviation area.

The Bosnia and Herzegovina Directorate of Civil Aviation (BHDCA), as an authority responsible for performing regulatory functions and oversight in the areas of civil aviation and air navigation, was established in 1997. It is only civil aviation authority responsible for registration of aircraft and issuance of certificates, licenses, approval, ratings and endorsements in the area of civil aviation.

Bosnia and Herzegovina National Supervisory Authority (The NSA Unit) is embedded in BHDCA.

BHDCA provides for constant implementation of Standards and Recommended Practice in accordance with ICAO SARPs, with requirements for the European Union, EASA and the European Organization for Safety of Air Navigation – EUROCONTROL – with the objective of continued improvement of safety and security.

BHDCA continuously enhances quality, effectiveness and efficiency of its performance with the view to meet the requirements of all stakeholders and to protect public interests.

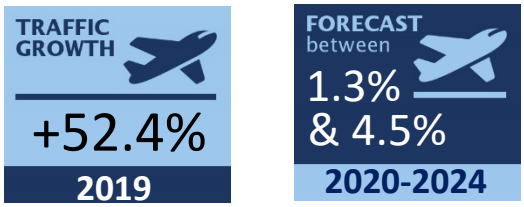
Bosnia and Herzegovina Air Navigation Services Agency (BHANSA) is certified by BHDCA and responsible for the provision of air navigation services in the FIR Sarajevo or in the Area of Responsibility defined by international agreements with neighbouring states.

Main airport covered by LSSIP: Sarajevo Airport

[1] Bosnia and Herzegovina is also one of EASA's Pan-European Partners (PANEP). This is a community of non-EASA European countries with which EASA cooperates on the implementation of the EU aviation safety rules - either in the framework of comprehensive aviation agreements already concluded with the EU or in anticipation of such agreements.

Traffic and Capacity

Summer Forecast (May to October inclusive)



The average en-route delay remained at zero minutes per flight in Summer 2019.

Bosnia and Herzegovina is part of:

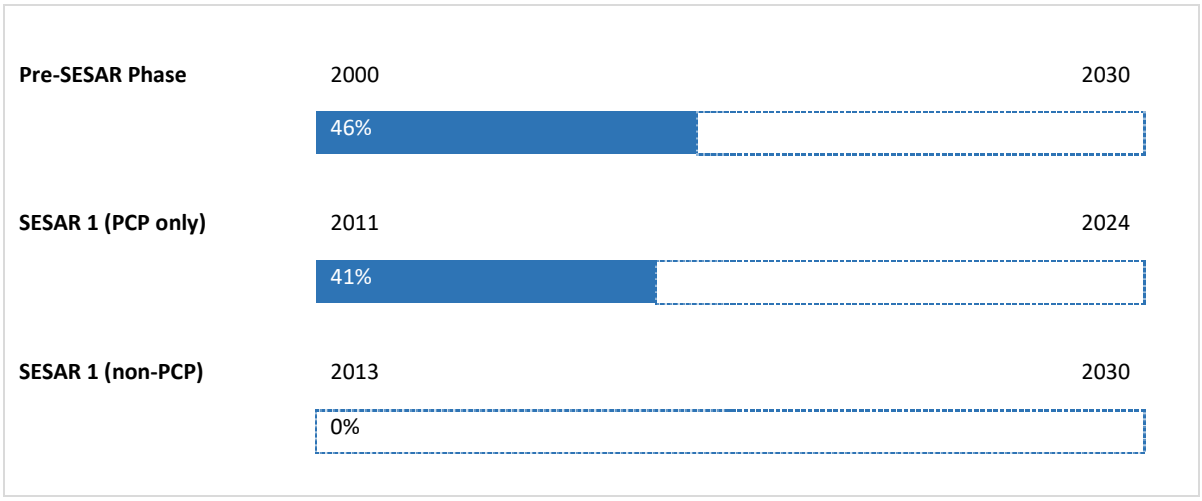
The FAB CE – FAB Central Europe

Progress per SESAR Phase

The figure below shows the progress made so far in the implementation of the SESAR baseline (Pre-SESAR and SESAR1 non-PCP) and the PCP elements.

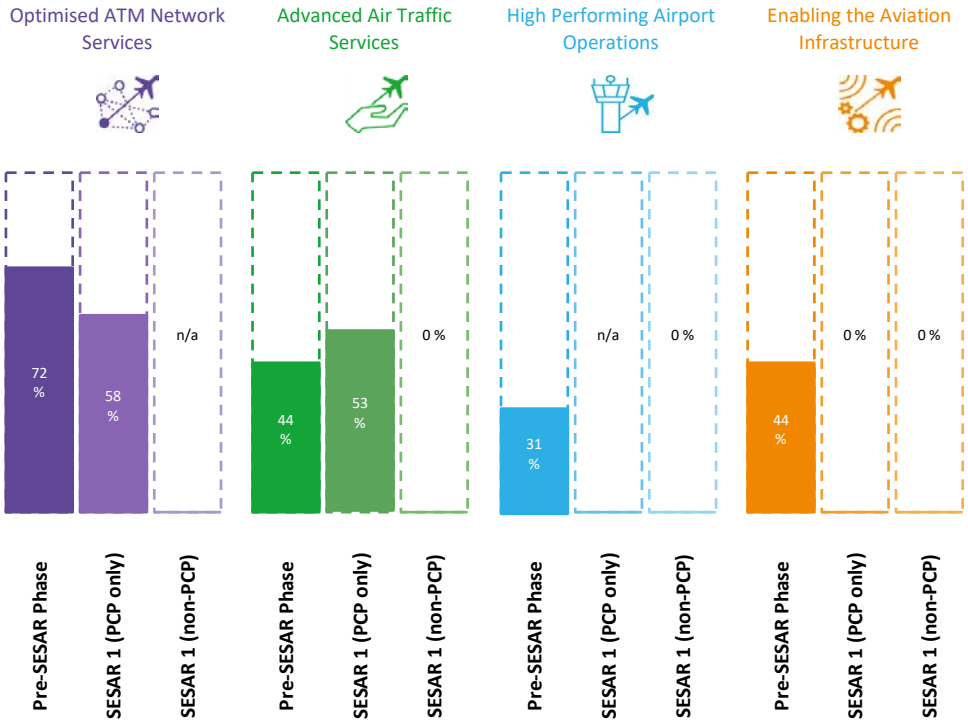
It shows the average implementation progress for all objectives grouped by SESAR Phases, excluding those for which the State is outside the applicability area as defined on a yearly basis in the European ATM Master Plan (Level 3) 2019, i.e. disregarding the declared "NOT APPLICABLE".LSSIP progress status.

SESAR 1 (non-PCP) progress in the graphics below for this State is based on the following objectives: AOP15, ATC02.9, NAV12 and COM11.2.



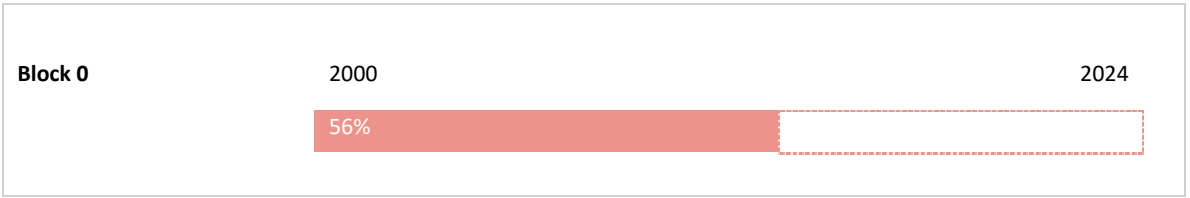
Progress per SESAR Key Feature and Phase

The figure below shows the progress made so far, per SESAR Key Feature, in the implementation of the SESAR baseline and the PCP elements. The percentages are calculated as an average, per Key Feature, of the same objectives as in the previous paragraph.



ICAO ASBUs Progress Implementation

The figure below shows the progress made so far in the implementation of the ICAO ASBUs Block 0. The overall percentage is calculated as an average of the relevant Objectives contributing to each of the relevant ASBUs; this is a summary of the table explained in Chapter 5.3 – ICAO ASBU Implementation Progress.



ATM Deployment Outlook

State Objectives

✓ **Deployed in 2018 - 2019**

- Surveillance Performance and Interoperability
ITY-SPI - 100 % progress
- ASM Support Tools to Support Advanced FUA (AFUA)
AOM19.1 - 100 % progress

By 2020	By 2021	By 2022	By 2023+
- Voice over Internet Protocol (VoIP) in En-Route COM11.1 - 00 % progress **- Aircraft Identification** ITY-ACID - 100 % progress **- Migrate from AFTN to AMHS** COM10 - 47 % progress **- Harmonise Operational Air Traffic (OAT) and General Air Traffic (GAT) Handling** AOM13.1 - 40 % progress	**- Implement enhanced tactical flow management services** FCM01 - 77 % progress **- Interactive Rolling NOP** FCM05 - 00 % progress **- Short Term ATFCM Measures (STAM) - Phase 2** FCM04.2 - 05 % progress **- Ensure Quality of Aeronautical Data and Aeronautical Information** ITY-ADQ - 05 % progress **- Automated Support for Conflict Detection, Resolution Support Information and Conformance Monitoring** ATC12.1 - 63 % progress		**- 8,33 kHz Air-Ground Voice Channel Spacing below FL195** ITY-AGVCS2 - 00 % progress **- Electronic Terrain and Obstacle Data (eTOD)** INF07 - 01 % progress **- Improve Runway Safety by Preventing Runway Excursions** SAF11 - 62 % progress **- RNP Approach Procedures to instrument RWY** NAV10 - 00 % progress **- RNP 1 in TMA Operations** NAV03.2 - 00 % progress

Airport Objectives - Sarajevo Airport

✓	**Deployed in 2018 - 2019**	None

By 2020	By 2021	By 2022	By 2023+
	- Airport Collaborative Decision Making (A-CDM) AOP05 - 14 % progress		

Introduction

The Local Single Sky ImPlementation (LSSIP) documents, as an integral part of the Master Plan (MP) Level 3 (L3)/LSSIP mechanism, constitute a short/medium term implementation plan containing ECAC States' actions to achieve the Implementation Objectives as set out by the MP Level 3 and to improve the performance of their national ATM System. This LSSIP document describes the situation in the State at the end of December 2019, together with plans for the next years.

Chapter 1 provides an overview of the ATM institutional arrangements within the State, the membership of the State in various international organisations, the organisational structure of the main ATM players - civil and military - and their responsibilities under the national legislation. In addition, it gives an overview of the Airspace Organisation and Classification, ATC Units and the ATM systems operated by the main ANSP;

Chapter 2 provides a comprehensive picture of the situation of Air Traffic, Capacity and ATFM Delay per each ACC in the State. It shows the evolution of Air Traffic and Delay in the last five years and the forecast for the next five years. It also presents the achieved performance in terms of delay during the summer season period and the planned projects assumed to offer the required capacity which will match the foreseen traffic increase and keep the delay at the agreed performance level;

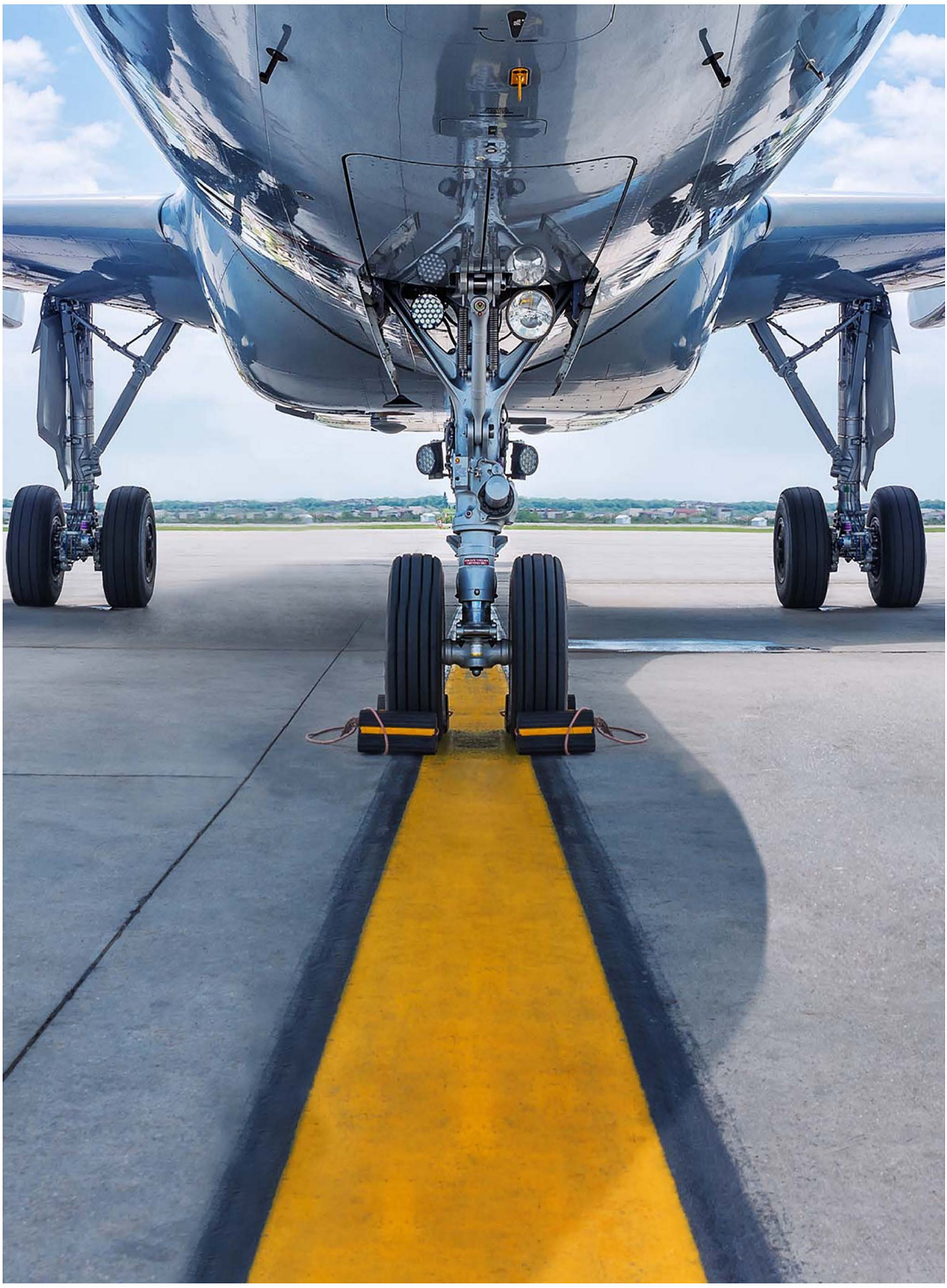
Chapter 3 provides the main Implementation Projects (at national, FAB and multinational level) which contribute directly to the implementation of the MP Operational Improvements and/or Enablers and Implementation Objectives. The Level 1 document covers a high-level list of the projects showing the applicable links. All other details like description, timescale, progress made and expected contribution to the ATM Key Performance Areas provided by the State per each project are available in the Level 2 document;

Chapter 4 deals with other cooperation activities beyond Implementation Projects. It provides an overview of the FAB cooperation, as well as all other multinational initiatives, which are out of the FAB scope. The content of this chapter generally is developed and agreed in close cooperation between the States concerned;

Chapter 5 contains aggregated information at State level covering the overall level of implementation, implementation per SESAR Key Feature and implementation of ICAO ASBUs. In addition, it provides the high-level information on progress and plans of each Implementation Objective. The information for each Implementation Objective is presented in boxes giving a summary of the progress and plans of implementation for each Stakeholder. The conventions used are presented at the beginning of the section.

The Level 1 document is completed with a separate document called LSSIP Level 2. This document consists of a set of tables organised in line with the list of Implementation Objectives. Each table contains all the actions planned by the four national stakeholders (REG, ASP, MIL and APO) to achieve their respective Stakeholder Lines of Action (SLoAs) as established in the European ATM Master Plan L3 Implementation Plan Edition 2019. In addition, it covers a detailed description of the Implementation Projects for the State as extracted from the LSSIP Data Base.

The information contained in Chapter 5 – Implementation Objectives Progress is deemed sufficient to satisfy State reporting requirements towards ICAO in relation to ASBU (Aviation System Block Upgrades) monitoring.



1. National ATM Environment

1.1. Geographical Scope

International Membership

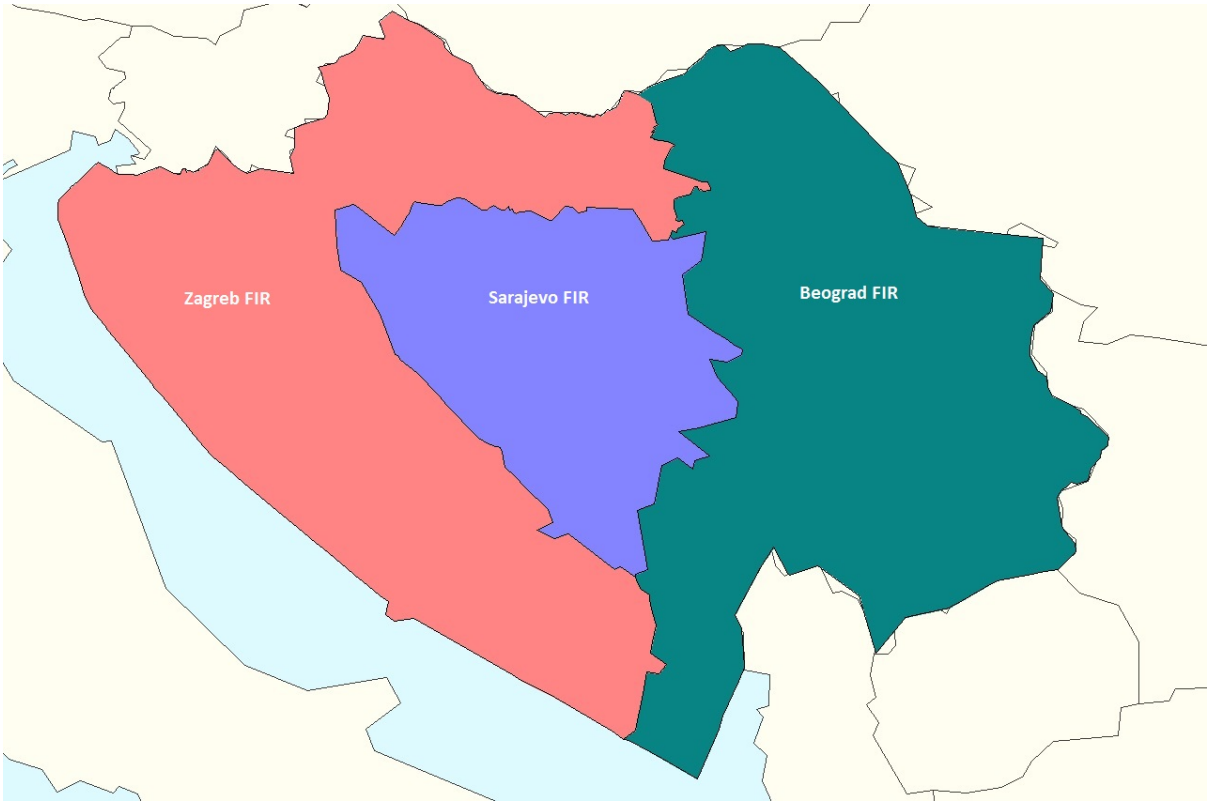
Bosnia and Herzegovina is a Member of the following international organisations in the field of ATM:

Organisation		Since
ECAC	✓	2001
EUROCONTROL	✓	2004
European Union	-	-
EASA	-	-
ICAO	✓	1993
NATO	-	-
ITU	-	-
JAA	✓	2008
EDA	-	-

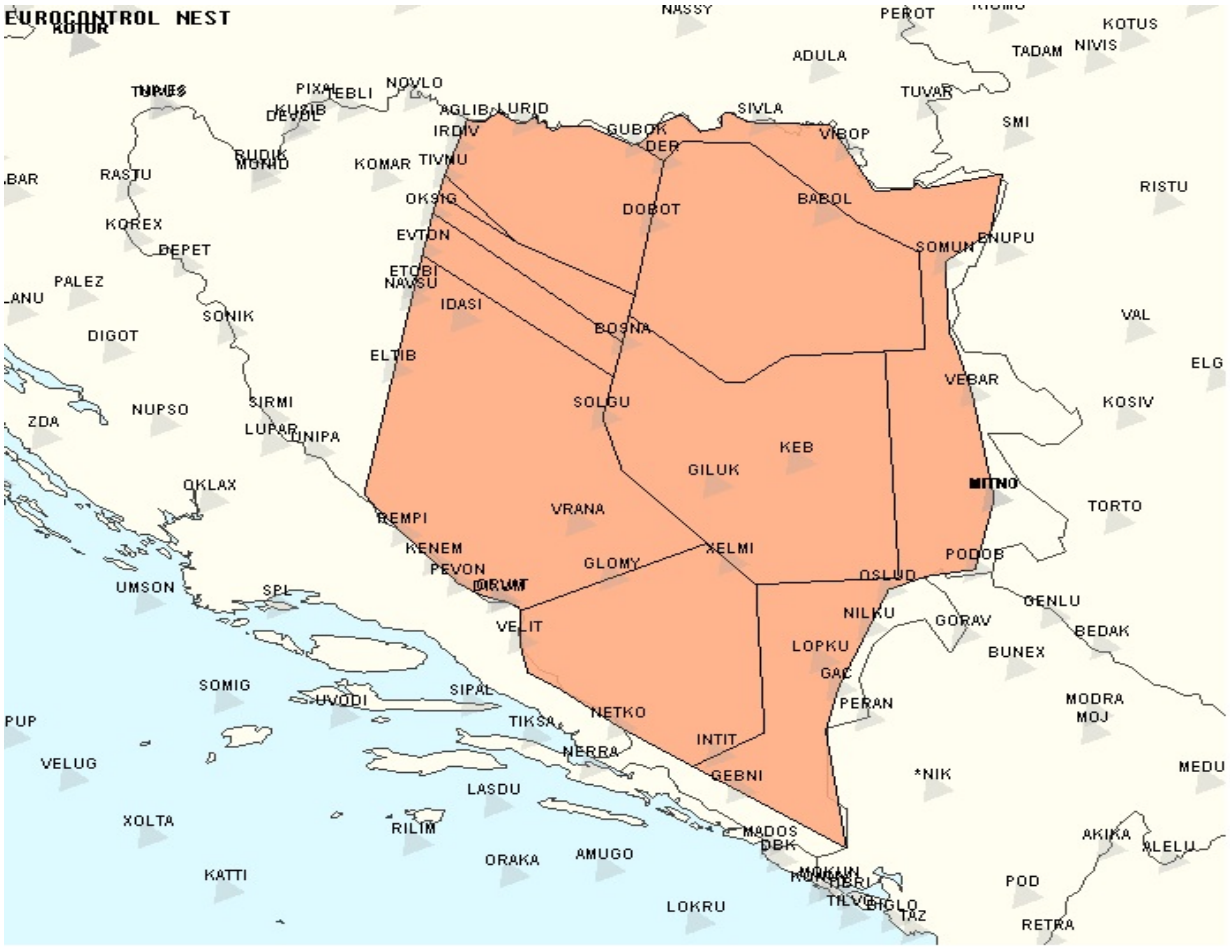
Geographical description of the FIR(s)

The geographical scope of this document addresses the Sarajevo FIR.

Sarajevo FIR is surrounded by FIRs of three States, namely Croatia, Montenegro, and Serbia.

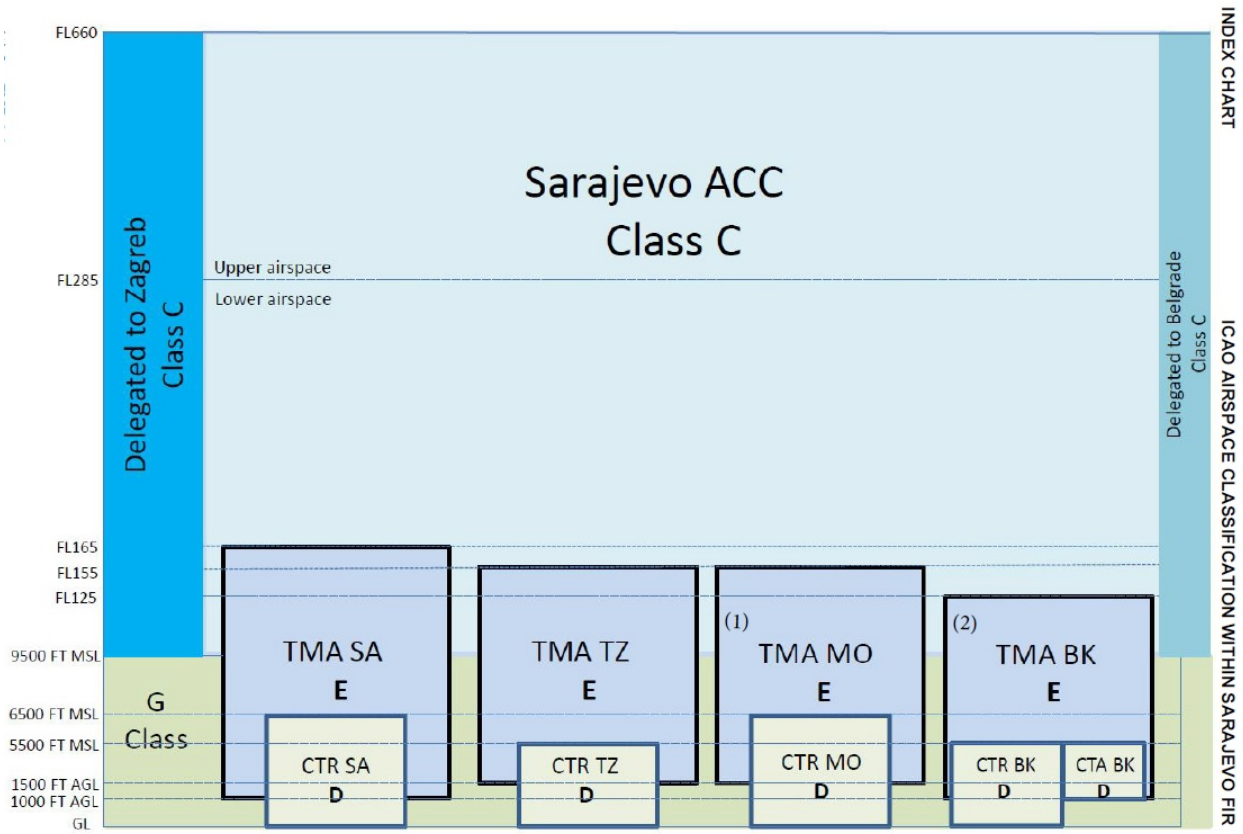


Current en-route BHANSA AoR:



Airspace Classification and Organisation

Bosnia and Herzegovina is following the ICAO airspace classification. The figure below shows the current classification within Sarajevo FIR.



ATC Units

The ATC units in the Bosnia and Herzegovina airspace, which are of concern to this LSSIP, are the following:

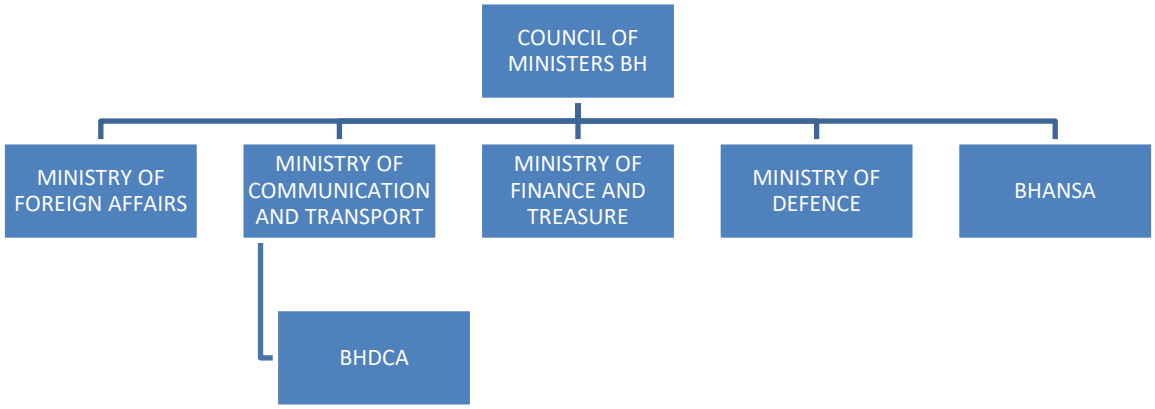
ATC Unit	Number of sectors		Associated FIR(s)	Remarks
	En-route	TMA		
BHACC	4	-	Sarajevo FIR	BHACC is comprised of 2 units, ATCU I Sarajevo and ATCU II Banja Luka
Banja Luka		1	Sarajevo FIR	Aerodrome and APP
Mostar	-	1	Sarajevo FIR	Aerodrome and APP
Sarajevo	-	2	Sarajevo FIR	Aerodrome and APP
Tuzla	-	1	Sarajevo FIR	Aerodrome and APP

1.2. National Stakeholders

The main National Stakeholders involved in ATM in Bosnia and Herzegovina are the following:

- The Ministry of Defence of Bosnia and Herzegovina;
- The Ministry of Communications and Transport of Bosnia and Herzegovina;
- BHDCA, Bosnia and Herzegovina Directorate of Civil Aviation (the role of NSA);
- BHANSA, Bosnia and Herzegovina Air Navigation Services Agency;
- The Ministry of Transport and Communications of the Republic of Srpska;
- The Ministry of Transport and Communications of the Federation of Bosnia and Herzegovina;

Their activities are detailed in the following subchapters and their relationships are shown in the diagram below.



Civil Regulator(s)

General Information

Under the present Aviation Law ("Official Gazette of BH" No 39/09), the Civil Aviation policy is under the authority of the Ministry of Communications and Transport of Bosnia and Herzegovina.
The Bosnia and Herzegovina Directorate of Civil Aviation (BHDCA) performs duties defined in the Aviation Law, and has the authority and responsibility for the execution of the Regulatory function and for oversight in civil aviation and air traffic control.
The BHDCA may delegate the provision of certification of the Service Provider to another institution duly authorized in accordance with international regulations.

Air Navigation Services in the airspace over the territory of Bosnia and Herzegovina shall be provided by the Air Navigation Services Agency - BHANSA. The foundation, responsibilities, authorities and management, as well as other issues essential to the establishment of the BHANSA are regulated under the Law on Air Navigation Services Agency of Bosnia and Herzegovina.

Air navigation services providers from other countries may continue to provide ANS within the airspace of Bosnia and Herzegovina if so regulated under an international agreement in which one of the contracting parties is Bosnia and Herzegovina.

The area of responsibility for provision of Air Navigation Services covers the TMAs, CTRs and the en-route airspace up to FL 660.

The different national entities having their own responsibilities in ATM are summarised in the table below. The BHDCA is further detailed in the following section:

Activity in ATM:	Organisation responsible	Legal Basis
Rule-making	BHDCA	The Aviation Law (Official Gazette of Bosnia and Herzegovina" No 39/09), bylaws and transposed EU Regulation.
Safety Oversight	BHDCA (audit and inspections)	The Aviation Law (Official Gazette of Bosnia and Herzegovina" No 39/09); Regulation on requirements for issuing certificate for providing air navigation services (Official Gazette of Bosnia and Herzegovina" No 54/17); Regulation on oversight in civil aviation (Official Gazette of Bosnia and Herzegovina" No 22/16, 55/18 and 5/19) and other relevant European regulations transposed.
Enforcement actions in case of non-compliance with safety regulatory requirements	BHDCA	The Aviation Law (Official Gazette of Bosnia and Herzegovina" No 39/09); Regulation on requirements for issuing certificate for providing air navigation services (Official Gazette of Bosnia and Herzegovina" No 54/17); Regulation on oversight in civil aviation (Official Gazette of Bosnia and Herzegovina" No 22/16 ,55/18 and 5/19).
Airspace	BHDCA Aviation Committee for airspace management in Bosnia and Herzegovina AMC (CIVAA, MILAA)	The Aviation Law (Official Gazette of Bosnia and Herzegovina" No 39/09); Regulation on transposition EU regulations on flexible use of airspace (Official Gazette of Bosnia and Herzegovina" No 79/10); Regulation of establishment and organisation of Airspace Management Cell (Official Gazette of Bosnia and Herzegovina" No 9/17); Decision on establishing Aviation Committee for airspace management in Bosnia and Herzegovina (Official Gazette of Bosnia and Herzegovina" No 75/16).
Economic	BHDCA	The Aviation Law (Official Gazette of Bosnia and Herzegovina" No 39/09); Regulation in the determining of a common scheme for air navigation services (Official

Activity in ATM:	Organisation responsible	Legal Basis
		Gazette of Bosnia and Herzegovina" No 79/10); Regulation on the method of determining and financing the cost of providing air navigation services in the airspace of Bosnia and Herzegovina (Official Gazette of Bosnia and Herzegovina" No 86/11).
Environment	BHDCA	The Aviation Law (Official Gazette of Bosnia and Herzegovina" No 39/09).
Security	BHDCA	The Aviation Law (Official Gazette of Bosnia and Herzegovina" No 39/09).
Accident investigation	Ministry of Communication and Transport	The Aviation Law (Official Gazette of Bosnia and Herzegovina" No 39/09); Regulation on Investigation of Aircraft Accidents and Serious Incidents (Official Gazette of Bosnia and Herzegovina" No 30/14).

BHDCA

The BHDCA (Bosnia and Herzegovina Directorate of Civil Aviation) is an administrative organization within the Ministry of Communications and Transport of Bosnia and Herzegovina. The seat of the BHDCA is in Banja Luka. The BHDCA has regional offices situated in Sarajevo and Mostar.

BHDCA has continued the legal continuity of the Bosnia and Herzegovina Directorate of Civil Aviation established by the Aviation Law of Bosnia and Herzegovina (BiH Official Gazette No: 02/04).
The BHDCA is the only civil aviation authority responsible for aircraft registration and issuance, extension and renewal of licences, certificates, endorsements and authorisations in the civil aviation of Bosnia and Herzegovina.

BHDCA performs inspections and controls via authorized inspectors. Inspections and controls may be performed inter alia on aircraft, aerodromes and airfields, air traffic control facilities and air operator certificate holders, aviation and other professional personnel.
The BHDCA, as a designated body of the National Supervisory Authority (NSA) for civil aviation, shall certificate the Service Provider and supervise the provision of air navigation services by the service provider, for the purpose of maintaining safety.

Annual Report published:	Y	Annual report will be available on request. Annual Safety Oversight Report Year 2019 is under preparation, by end of March.

The web site of the BHDCA is: www.bhdca.gov.ba

Air Navigation Service Provider(s)

BHANSA

Services provided

BHANSA (Bosnia and Herzegovina Air Navigation Services Agency) is established by the Law as the Agency for Air Navigation Services in Bosnia and Herzegovina ("Official Gazette of BH" No 43/09). Under that Law BHANSA is responsible for: the provision of air traffic control services, provision of communication, navigation and surveillance services, provision of aeronautical information services, provision of aeronautical meteorological services, operations of the rescue coordination center in search and rescue, education and training of air traffic control staff, export and import for the needs of the Agency, other tasks and operations providing for safe air navigation.

The Agency shall provide air navigation services in the airspace of Bosnia and Herzegovina for the Flight Information Region (FIR Sarajevo).

The Agency may also provide air navigation services outside of the airspace of Bosnia and Herzegovina and it should be regulated by an international agreement with Bosnia and Herzegovina being a contracting party therein.

BHANSA shall comprise the organizational units as follows: Main office in Mostar; Area Control Centre (ACC) with operational Air Traffic Control Units in Sarajevo (ATCU I) and Banja Luka (ATCU II); Operational-technical services; Bosnia and Herzegovina Meteorological Watch Office (BiH MET) in Banja Luka, Flight information Service of Bosnia and Herzegovina (FIS) integrated with BHRCC in Banja Luka, Aeronautical Information Services of Bosnia and Herzegovina (AIS BiH) in Mostar; Air Traffic Control Training Centre with ATC simulator in Mostar, International NOTAM office of Bosnia and Herzegovina (BH NOF) in Sarajevo, Approach and Aerodrome Control Units at the controlled airports in Bosnia and Herzegovina: Sarajevo, Banja Luka, Mostar and Tuzla.

BHANSA in cooperation with MoD introduces Airspace Management Cell of Bosnia and Herzegovina – AMC.

Governance:	State Ministerial Organs	**Ownership:**	State
Services provided	**Y/N**	**Comment**	
ATC en-route	Y	BHANSA (Bosnia and Herzegovina Agency for Air Navigation Services) up to FL 660	
ATC approach	Y	BHANSA	
ATC Aerodrome(s)	Y	BHANSA	
AIS	Y	BHANSA	
CNS	Y	BHANSA	
MET	Y	BHANSA	
ATCO training	Y	OJT and continuation training for ACC (Area), Aerodrome and Approach. Other forms of training are provided by external organisations.	
Others	Y Y	Search and Rescue, BHANSA, (Rescue Coordination Centre) Airspace Management Cell, BHANSA	
Additional information:	The Aviation Law (Official Gazette of BH" No 39/09) and the Law on Air Navigation Services Agency of Bosnia and Herzegovina (Official Gazette of BH" No 43/09), guarantee separation of regulatory and ANSP.		
Provision of services in other State(s):	N		
Annual Report published:	N		

The web site of BHANSA is: www.bhansa.gov.ba

Additional web addresses of the organizations providing ANS:
www.crocontrol.hr and www.smatsa.rs.

ATC Systems in use

Main ANSP part of any technology alliance[2]	N	

FDPS

Specify the manufacturer of the ATC system currently in use:	Indra Mangair (DPS) - Main
Upgrade[3] of the ATC system is performed or planned?	Performed in 2019
Replacement of the ATC system by the new one is planned?	
ATC Unit	ACC/ APP Sarajevo

Specify the manufacturer of the ATC system currently in use:	Indra Mangair (DPS) - Backup
Upgrade of the ATC system is performed or planned?	Performed in 2019
Replacement of the ATC system by the new one is planned?	
ATC Unit	ACC/ APP Sarajevo

Specify the manufacturer of the ATC system currently in use:	Thales Eurocat-C (DPS) - Backup
Upgrade of the ATC system is performed or planned?	
Replacement of the ATC system by the new one is planned?	
ATC Unit	APP Sarajevo

SDPS

Specify the manufacturer of the ATC system currently in use:	ARTAS - Main
Upgrade of the ATC system is performed or planned?	Performed in 2019
Replacement of the ATC system by the new one is planned?	
ATC Unit	ACC/ APP Sarajevo

Specify the manufacturer of the ATC system currently in use:	Indra Mangair (DPS) - Backup
Upgrade of the ATC system is performed or planned?	Performed in 2019
Replacement of the ATC system by the new one is planned?	
ATC Unit	ACC/ APP Sarajevo

Specify the manufacturer of the ATC system currently in use:	Indra Mangair (DPS) - Fallback
Upgrade of the ATC system is performed or planned?	Performed in 2019
Replacement of the ATC system by the new one is planned?	
ATC Unit	ACC/ APP Sarajevo

Specify the manufacturer of the ATC system currently in use:	Thales Eurocat-C (DPS)
Upgrade of the ATC system is performed or planned?	
Replacement of the ATC system by the new one is planned?	
ATC Unit	APP Sarajevo

[2] Technology alliance is an alliance with another service provider for joint procurement of technology from a particular supplier (e.g. COOPANS alliance)

[3] Upgrade is defined as any modification that changes the operational characteristics of the system (SES Framework Regulation 549/2004, Article 2 (40))

Airports

General information

There are four airports in Bosnia and Herzegovina, namely Banja Luka/Mahovljani, Mostar/Ortiješ, Sarajevo/Butmir and Tuzla/Dubrave are operated by public enterprises that are responsible only for ground services.

Airport(s) covered by the LSSIP

Referring to the List of Airports in the European ATM Master Plan Level 3 Implementation Plan Edition 2019 – Annex 2, it is up to the individual State to decide which additional airports will be reported through LSSIP for those Objectives.

Therefore, Sarajevo International Airport (LQSA) is the only airport in Bosnia and Herzegovina covered by the LSSIP Year 2019.

The EUROCONTROL Public Airport Corner also provides information for the following airport(s):
https://ext.eurocontrol.int/airport_corner_public/LQSA

Military Authorities

The organizations and bodies of defense structure of BiH as it shown on figure 6.2. have responsibilities as follow:

The Presidency of Bosnia and Herzegovina has supreme command and control over the Armed Forces of Bosnia and Herzegovina while Parliamentary Assembly of Bosnia and Herzegovina conducts civilian control over the Armed Forces of Bosnia and Herzegovina.

The Ministry of Defense of Bosnia and Herzegovina is in charge of the overall strategy and policy for the defense system of Bosnia and Herzegovina. Airspace Management and Protection Division as a part of Sector for policy and plans is doing tasks related to Military Aviation Authority on behalf of Ministry of Defense.

The Joint Staff of the AF BiH is responsible for planning, organization and implementation of the directive and orders of the Minister of Defense of BiH.

The Operational Command of the AF BiH implements the policies of the Joint Staff of the AF BiH as well as tasks related to air force and air defense while Support Command manages personnel, logistics and training matters.

Air Force and Air Defense Brigade, which is consisted of 2 flying squadrons, 1 fix wing sq. air surveillance battalion, air defense battalion, and flight support battalion, is subordinated to Operational Command.

Division responsible for the using of airspace, airspace defense, organization, definition of military operational requirements is an integral part of Policy and Planning Sector and does not have any particular role in the provision of ATS.

Regulatory role

Regulatory framework and rule making

OAT		GAT	
OAT and provision of service for OAT governed by national legal provisions?	Y	Provision of service for GAT by the Military governed by national legal provisions?	N
Level of such legal provision: Ministerial Decree, and Air Force Regulation (Standard Operational Procedures)		Level of such legal provision: N/A	
Level of such legal provision: Ministerial Decree, and Air Force Regulation (Standard Operational Procedures)		Authority signing such legal provision: N/A	
These provisions cover:		These provisions cover:	
Rules of the Air for OAT	Y		
Organisation of military ATS for OAT	N/A	Organisation of military ATS for GAT	N/A
OAT/GAT Co-ordination	Y	OAT/GAT Co-ordination	N/A
ATCO Training	N/A	ATCO Training	N/A
ATCO Licensing	N/A	ATCO Licensing	N/A
ANSP Certification	N/A	ANSP Certification	N/A
ANSP Supervision	N/A	ANSP Supervision	N/A
Aircrew Training	Y	ESARR applicability	N/A
Aircrew Licensing	N/A		
Additional Information: -		Additional Information: -	
Means used to inform airspace users (other than military) about these provisions:		Means used to inform airspace users (other than military) about these provisions:	
National AIP	Y	National AIP	Y
National Military AIP	N	National Military AIP	N
EUROCONTROL eAIP	N	EUROCONTROL eAIP	N
Other:	-	Other:	-

Oversight

OAT	GAT
National oversight body for OAT: N/A	NSA (as per SES Regulation 550/2004) for GAT services provided by the military: N/A
Additional information: Inspection established at the level of Air Force Air Defence Brigade	Additional information:

Service Provision role

OAT			GAT	
Services Provided:			Services Provided:	
En-Route	Y	BHANSA is providing service	En-Route	Y
Approach/TMA	Y	BHANSA is providing service	Approach/TMA	Y
Airfield/TWR/GND	Y	BHANSA is providing service	Airfield/TWR/GND	Y
AIS	Y	BHANSA is providing service	AIS	Y
MET	Y	BHANSA is providing service	MET	Y
SAR	Y	BHANSA is providing service	SAR	Y
TSA/TRA monitoring	N	BHANSA	FIS	Y
Other:			Other:	
Additional Information:			Additional Information:	

User role

IFR inside controlled airspace, Military aircraft can fly?	OAT only		GAT only		Both OAT and GAT	Y

If Military fly OAT-IFR inside controlled airspace, specify the available options:			
Free Routing	N	Within specific corridors only	Y
Within the regular (GAT) national route network	N	Under radar control	Y
Within a special OAT route system	N	Under radar advisory service	Y

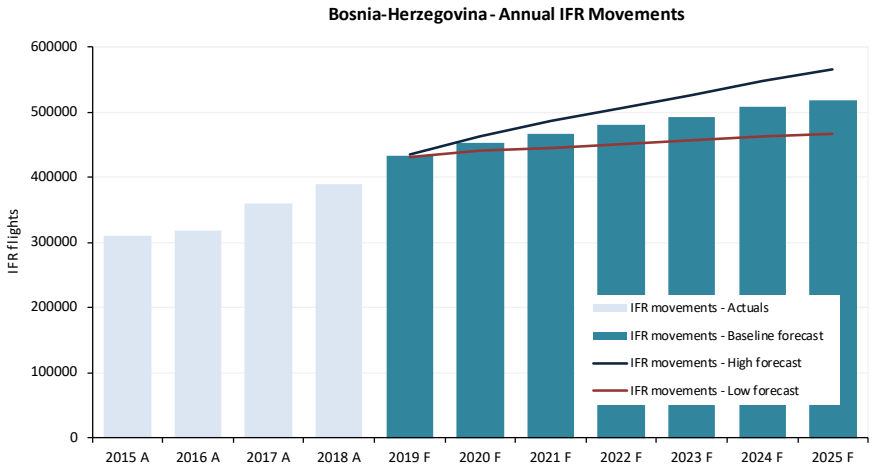
If Military fly GAT-IFR inside controlled airspace, specify existing special arrangements:								
No special arrangements				N	Exemption from Route Charges			Y
Exemption from flow and capacity (ATFCM) measures				N/A	Provision of ATC in UHF			N
CNS exemptions:	RVSM	N	8.33	N	Mode S	N	ACAS	N
Others:	-							

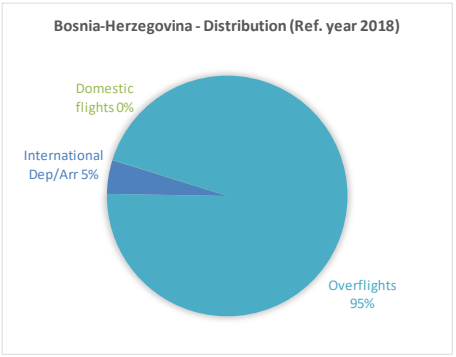
Flexible Use of Airspace (FUA)

Military in Bosnia applies FUA requirements as specified in the Regulation No 2150/2005: Y
FUA Level 1 implemented: Y Airspace Management Committee of Bosnia and Herzegovina since 2016
FUA Level 2 implemented: Y Airspace Management Cell – AMC since 6 December 2018
FUA Level 3 implemented: Y

2. Traffic and Capacity

2.1. Evolution of traffic in Bosnia and Herzegovina





A = Actual

F = Forecast

EUROCONTROL Seven-Year Forecast (Autumn 2019)											
IFR flights yearly growth		2016 A	2017 A	2018 A	2019 F	2020 F	2021 F	2022 F	2023 F	2024 F	2025 F
Bosnia-Herzegovina	H				11.7%	6.5%	5.1%	4.2%	3.9%	4.0%	3.5%
	B	2.6%	12.6%	8.3%	11.2%	4.5%	3.1%	3.1%	2.7%	2.9%	2.2%
	L				10.6%	2.4%	0.9%	1.4%	1.3%	1.4%	0.7%
ECAC	B	2.8%	4.0%	3.8%	1.1%	2.3%	1.9%	2.2%	1.8%	1.9%	1.4%

2019

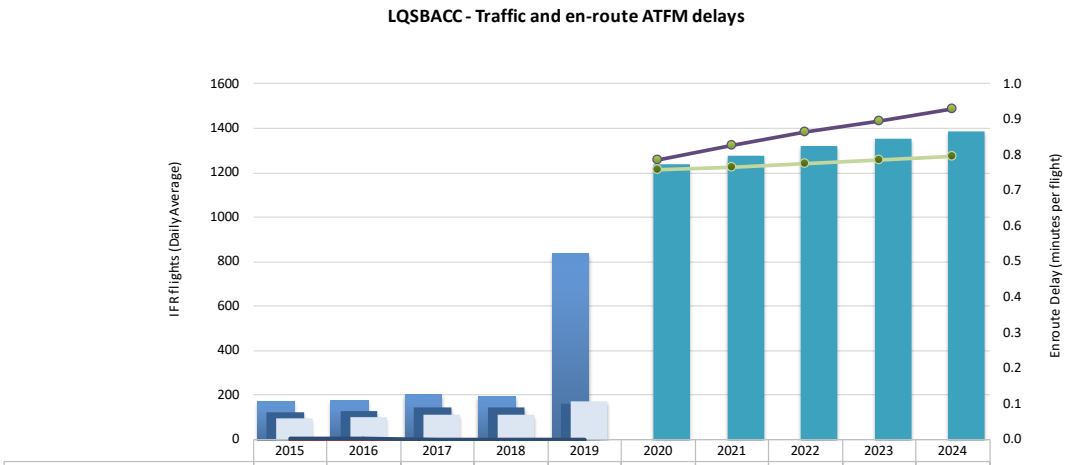
Based on NM archived data, traffic in BHANSA area of in responsibility increased by 52.4% 2019 compared to 2018.

2020-2024

The EUROCONTROL Seven-Year Forecast predicts an average annual increase between 1.3% and 4.5% throughout the planning cycle, with a baseline growth of 3.1%.

2.2. ACC BH

Traffic and en-route ATFM delays 2015-2024



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Peak Day Traffic	174	177	204	194	842					
Summer Traffic	121	127	143	144	161					
Yearly Traffic	96	101	114	114	174					
Summer Traffic Forecast						1236	1277	1318	1354	1388
High Traffic Forecast - Summer						1260	1325	1383	1431	1485
Low Traffic Forecast - Summer						1214	1224	1240	1260	1275
Summer enroute delay (all causes)	0.00	0.00	0.00	0.00	0.00					
Yearly enroute delay (all causes)	0.00	0.00	0.00	0.00	0.00					

Performance summer 2019

BHACC	Traffic evolution (2019 vs 2018)			En-route Delay (min. per flight)		Capacity (2019 vs 2018)		
	Traffic Forecast		Actual Traffic	All reasons	ACC Reference Value	Planned	Achieved	Capacity gap?
	Current Routes	Shortest Routes						
Year	**H:** 3.1%	+25%	+52.1%	0.00	0.01			
Summer	**B:** 2.5% **L:** 1.0%		+12.4%	0.00		27 (+0%)	27 (+0%)	No

Summer 2019 performance assessment

The average en-route delay per remained at zero minutes per flight in Summer 2019.

The capacity baseline was estimated with ACCESS at 27. During the measured period, the average peak 1 hour demand was 15 and the average peak 3 hour demand was 13.

Operational actions	Achieved	Comments
Implementation of 2 PBN procedures for TMA Mostar and Banja Luka	No	Postponed to 2020.
Enhanced ATFM techniques, including STAM	Yes	
Changes of areas of responsibility between Zagreb, Beograd and BH ACCs (Phase 2 BHANSA). New ATCC sectorisation	Yes	Cut-off date 5.12.2019.
New procedures shall be developed after FRA RTS and System upgrade	Yes	
NEW ATCOs	Yes	
New VCS implementation - DPS Upgrade	Yes	

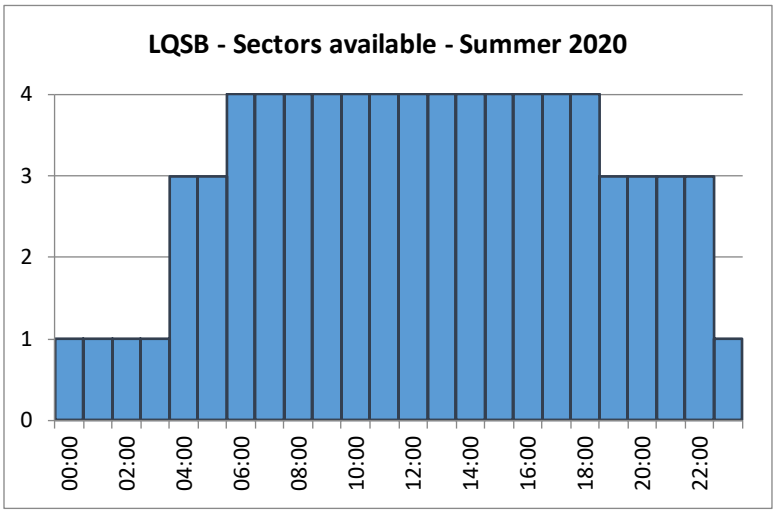
CAPAN study	Yes	
New and flexible sectorisation and sector capacities	Yes	Cut-off date 5.12.2019.
Maximum configuration: 2 sectors	Yes	- 2 sectors were opened, - 4 sectors will be opened after Cut-off date 05.12.2019.

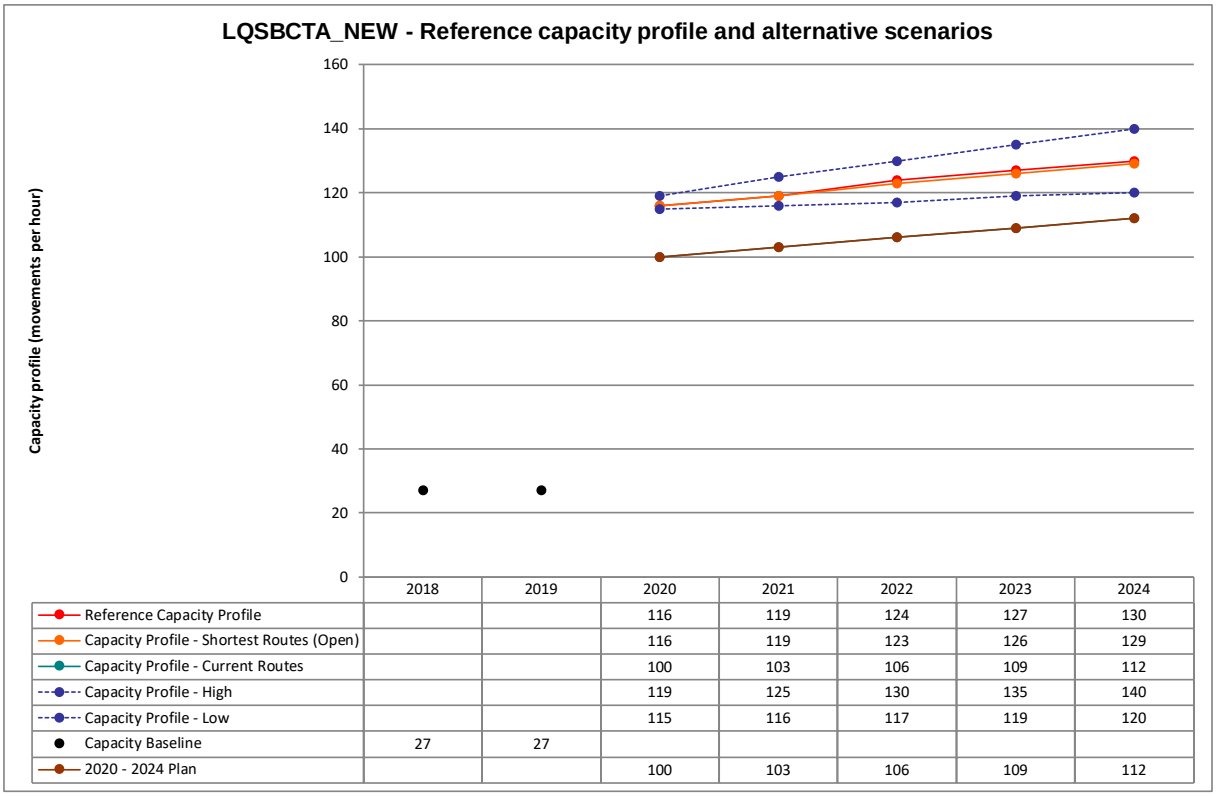
Planning Period 2020-2024

The planning focuses on the Summer season to reflect the most demanding period of the year from a capacity perspective. This approach ensures consistency with the previous planning cycles.

The measures for each year are the measures that will be implemented before the summer season.

Summer Capacity Plan					
	2020	2021	2022	2023	2024
Free Route Airspace					
Airspace Management Advanced FUA	LARA				
Airport & TMA Network Integration	Implementation of 2 PBN procedures for TMA Mostar and Banja Luka				
Cooperative Traffic Management	Enhanced ATFM techniques, including STAM				
Airspace	TMA Sarajevo, Tuzla, Banja Luka, Mostar reorganisation				
Procedures					
Staffing	NEW ATCOs				
Technical	Continuous system upgrades				
Capacity	Continous capacity assessment				
Significant Events	BHATM Phase 2				
Max sectors	4	5	5	5	5
Planned Annual Capacity Increase	270%	3%	3%	3%	3%
Reference profile Annual % Increase	330%	3%	4%	2%	2%
Current Routes Profile % Increase	270%	3%	3%	3%	3%
Difference Capacity Plan v. Reference Profile	-13.8%	-13.4%	-14.5%	-14.2%	-13.8%
Difference Capacity Plan v. Current Routes Profile	0.0%	0.0%	0.0%	0.0%	0.0%
Annual Reference Value (min)	0.17	0.18	0.14	0.10	0.10
Additional information					





	2018	2019	2020	2021	2022	2023	2024
Reference Capacity Profile			116	119	124	127	130
Capacity Profile - Shortest Routes (Open)			116	119	123	126	129
Capacity Profile - Current Routes			100	103	106	109	112
Capacity Profile - High			119	125	130	135	140
Capacity Profile - Low			115	116	117	119	120
Capacity Baseline	27	27					
2020 - 2024 Plan			100	103	106	109	112

2020-2024 Planning Period Outlook
No capacity problems are foreseen for the ACC during the planning cycle if flights would follow the current routes. Should the traffic shift onto the shortest routes additional capacity enhancement measures would be required.

3. Implementation Projects

The tables below presents the high-level information about the main projects currently ongoing in Bosnia and Herzegovina. The details of each project are available in Chapter 2 of the Level 2 - Detailed Implementation Status document.

3.1. National projects

Name of project:	Organisation(s):	Schedule:	Status:	Links:
New AMHS	BHANSA (BA)	2Q 2020	Ongoing	L3: COM10
New MET	BHANSA (BA)	mid 2021	procurement in progress	-
New Military Radio stations	Mil. Authority (BA)	mid 2019	procurement in progress	L3: ITY-AGVCS2
New Radio Stations (APP)	BHANSA (BA)	1Q 2021	procurement in progress	L3: COM11.1, ITY-AGVCS2
New VCS (APP)	BHANSA (BA)	1Q 2021	Procurement in progress	L3: COM11.1

3.2. FAB projects

Name of project:	Organisation(s):	Schedule:	Status:	Links:
Airspace Task Force	ASP ANS CR (CZ), Austrocontrol (AT), BHANSA (BA), CCL Service Provider (HR), HungaroControl (HU), Letové prevádzkové služby Slovenskej republiky, štátny podnik (SK), Slovenia Control (SI)	Start: 10.04.2019, End: 30.05.2020	Activities are ongoing	L3: AOM21.2
DEVOPS: FABCE Development of Operational Performance and ATM Strategies (previously Project 1) (DEVOPS)	ASP ANS CR (CZ), Austrocontrol (AT), BHANSA (BA), CCL Service Provider (HR), HungaroControl (HU), Letové prevádzkové služby Slovenskej republiky, štátny podnik (SK), Slovenia Control (SI)	Start 3.1.2011, End: Continuous	FAB CE FRA Study was completed in 2017. Other activities above are ongoing.	L3: AOM21.2 DP: N/A but included in DP under '102AF3 Free route airspace from the Black Forest to the Black Sea' RP2 PP: FAB CE FRA Project (described under NSP actions 'FAB CE Airspace and route structure planning' and 'Free Route Airspace')
FAB CE Contingency Readiness - Phase II	ASP ANS CR (CZ), Austrocontrol (AT), BHANSA (BA), CCL Service Provider (HR), HungaroControl (HU), Letové prevádzkové služby Slovenskej republiky, štátny podnik (SK), Slovenia Control (SI)	Start: 01.01.2019, End: 31.12.2020	Activities are ongoing	-
Navigation infrastructure optimization project	ASP ANS CR (CZ), Austrocontrol (AT), BHANSA (BA), CCL Service Provider (HR), HungaroControl (HU), Letové prevádzkové služby Slovenskej republiky, štátny podnik (SK), Slovenia Control (SI)	Start: April 2018, End: February 2020	On-going	-

3.3. Multinational projects

Name of project:	Organisation(s):	Schedule:	Status:	Links:
Innovative transportation services for blind and visually impaired passengers in Danube Region	SARAJEVO Airport (BA)	Ongoing	-	-
eGAFOR (2016-EU-TMC-0075-S)	BHANSA (BA), CCL Service Provider (HR), ROMATSA (RO), SMATSA (BA)	The project is expected to be completed by December 31, 2020.	Ongoing	-

4. Cooperation activities

4.1. FAB Co-ordination

Having signed and ratified the Agreement on the Establishment of Functional Airspace Block Central Europe, Austria, Bosnia and Herzegovina, Croatia, the Czech Republic, Hungary, Slovakia and Slovenia are part of FAB CE.

The FAB CE States agreed on establishment of the following permanent bodies - the FAB CE Council, NSA Coordination Committee and Joint Civil-Military Airspace Coordination Committee. The FAB CE Council can also establish other bodies necessary for the implementation, operation and further development of the FAB CE Programme. At the ANSP level, the FAB CE is directed and steered by the CEO Committee and Steering Committee. Specialised SubCommittees have been established for operational, technical, safety, financial, HR and legal domains.

The air navigation service providers of the FAB CE countries established a joint company **FABCE Aviation Services, Ltd** (FCE) already in 2014 and the company is responsible for the professional management of various regional air navigation projects. The establishment of this joint venture is not only effectively aiming at the progress of the FAB CE programme, but at the same time the Single European Sky programme of the European Union. In 2018, the ANSPs decided to modify the FCE Memorandum of Association and Shareholders Agreement which now allows technical and operational projects to be launched by a group of FAB CE partners focused on a specific area of air traffic management performance improvement. Not all FAB CE ANSPs share the same operational, traffic load and equipment priorities, but until now there was a need for the consent of all partners to proceed. This agreement allows FAB CE partners with a focus on a specific area of performance improvement to form new collaborative agreements which helps to address specific customer requirements while increasing the overall effectiveness of the FAB CE work programme.

There have been a number of important achievements in 2019 focusing on several key areas. The following bullets summarise the most important activities delivering the benefits to airspace users:

- Airspace planning and network development activities focusing on continuous improvements to enable optimum use of airspace, taking into account air traffic flows are the top priority for FAB CE. The FAB CE ANSPs have transformed themselves into a 'FAB CE Airspace Alliance' in 2018 and dedicated a lot of effort to initiate actions to be taken by FAB CE ANSPs in support of the Network Manager's (NM) European Airspace Architecture Study (EAAS) airspace re-configuration programme Transition Plan. The ANSPs agreed a number of important airspace design improvement studies and related technical programmes to ensure airspace users can further optimise their trajectories through FAB CE airspace over the coming years. This triggered also a complete revision of the FAB CE Strategy for 2020-2030 to be fully aligned with the EAAS vision which has been mostly completed in 2019 and is now pending approval. More detailed actions how to achieve the vision are now being elaborated in the new FAB CE High Level Plan.
- FAB CE has established a Task Force to study further areas of regional cooperation with the aim of establishing an airspace design optimized for all airspace users aligned with the EAAS activities. FAB CE is fully prepared to cooperate with the Network Manager, supporting the planning and implementation of proposed concepts in a network centric approach and the implementation of Digital European Sky functionality, which was confirmed at the joint meetings with NM under the umbrella of this activity. FAB CE invited the NM to participate directly in the FAB CE Airspace Task Force activities and started to gather all requirements and views on NM roadmap proposals for a major re-sectorisation of FAB CE airspace.
- The FAB CE states, together with their neighbouring partners, are still at the frontline of the Free Route Airspace (FRA) implementation in the region. The NM confirmed that FAB CE is the most advanced FAB in terms of FRA deployment and very few elements are missing from the complete deployment of FRA procedures in the FAB CE area. Further organic expansion of FRA through the Introduction of the new sectorisation programme will need to be performed gradually. The completion of the SEE FRA project (South East Europe Free Route Airspace) on November 7, 2019 has opened up 24/7 cross border free route operations across the airspace of Bulgaria, Hungary and Romania. As a future step, Slovakia (as a part of SEEN FRA project - South East Europe Night Free Route Airspace together with Bulgaria, Hungary and Romania), will assess the opportunities to join the SEE FRA airspace as 24/7 free route operations are

already implemented within Slovakian airspace. To enable the full benefits of FRA implementation the FAB CE ANSPs agreed to start work on the implementation plan for the merger of the current SEE(N) FRA and SECSI FRA areas to enable FAB CE-wide seamless and traffic flow-oriented FRA area. Full FRA coverage in FAB CE will be achieved following the implementation in 2021 by ANS Czech Republic of FRA in the Prague flight information region (FIR).

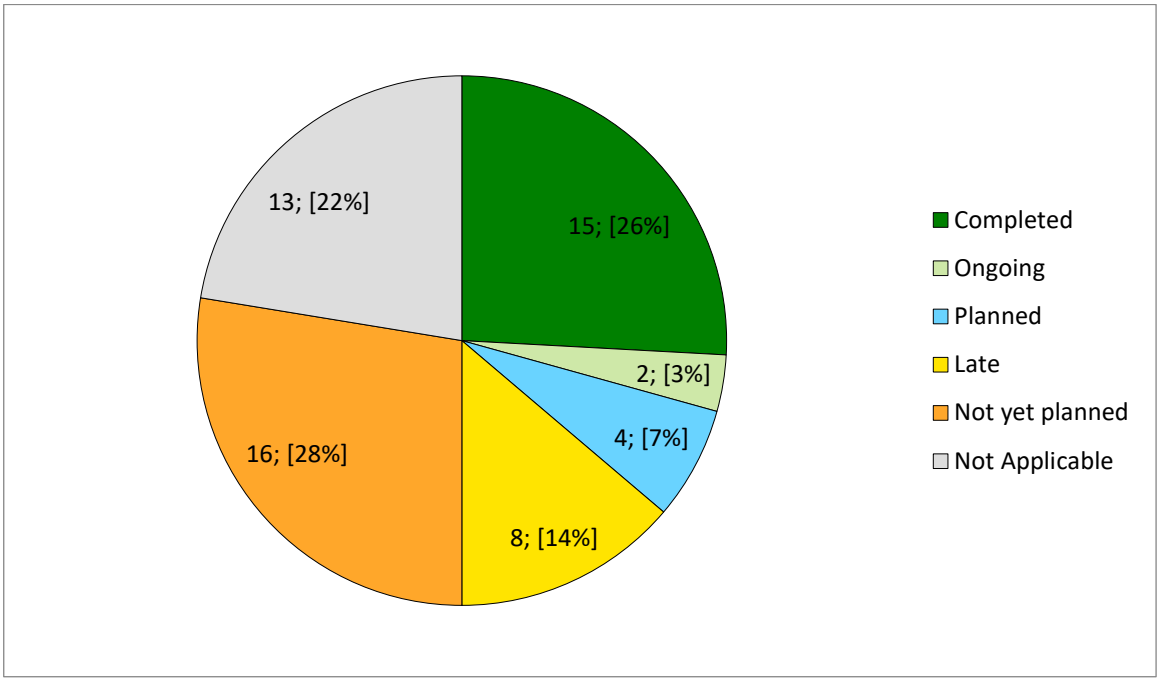
- FAB CE ANSPs have completed Phase I of an activity to develop a joint contingency concept in cooperation with the Network Manager in 2018. Phase I resulted in commonly agreed concept, procedures and technical enablers for the management of short- and medium-term (less than 2 hours) contingency event. FAB CE has now initiated Phase II which will address management of long-term contingency events (beyond 2 hours duration) and will provide for a common coordination platform for coordinating and monitoring the implementation activities of Phase I. Due to the delays in NM coordination the project mobilisation has been however delayed and activities are planned to take place during 2020.
- The NAVAID optimisation project (which will improve interoperability and data-sharing through the optimisation of navigational aid infrastructure, reducing duplication and unnecessary complexity) significantly progressed in 2019. The processes for coordinated NAVAID infrastructure and preventive maintenance planning and information-sharing where operational dependencies are evident have been developed and are in the process of implementation. The second part of the project is focusing on an analysis of NAVAID infrastructure and coverage - including those of neighbouring countries, is ongoing and is expected to be completed in the first quarter of 2020. The objective is to identify potential areas for improvement, including operational interdependencies and requirements. The third part, which is now completed, focused on solving operational issues – namely, assessing vulnerabilities within the global navigation satellite system (GNSS) network. This will require addressing signal monitoring and interference issues while assessing how free route airspace will influence the requirements for ground-based NAVAIDs in this new era of area navigation operations.
- FAB CE ANSPs finalised their common approach to meeting the requirements for Air Traffic Safety Electronics Personnel (ATSEP) training required by European Commission Regulation 2017/373, the “Air Traffic Management Common Requirements Implementing Regulation” (ATM IR), which comes into effect on 2 January 2020. It has required a considerable level of cooperation among FAB CE partners to develop a common approach to certifying ATSEP competency levels as each ANSP has deployed different technologies, and has different support and training requirements.
- In 2019, FAB CE has identified and initiated a number of cooperation activities in the technical domain. These include a coordinated approach to ADS-B deployment, coordinated monitoring and protection of surveillance frequencies, common approach to datalink monitoring. Several ANSPs participate in the smart procurement of spare parts procurement and equipment suppliers have been contacted to investigate procurement pooling arrangements. The processes established under the previous project on surveillance infrastructure and services optimisation are ongoing. A group of the ANSPs are working on coordinated testing to enable sharing of the experience between ANSPs and allow more efficient planning of VoIP. Other cooperation activities include the assessment of the future FAB CE communication network called X-bone, joint RCOM and NAV workshops and coordination of the cyber security activities.

The FAB CE Programme is continuously updated by the FAB CE bodies under management of the FAB CE Programme Manager with the support of the FAB CE Programme Support Office and there are a number of pending projects focusing on delivering additional benefits to airspace users that will be implemented in the near future.

5. Implementation Objectives Progress

5.1. State View: Overall Objective Implementation Progress

The graph below shows progress for all Implementation Objectives (applicable and not applicable to the State).



5.2. Objective Progress per SESAR Key Feature

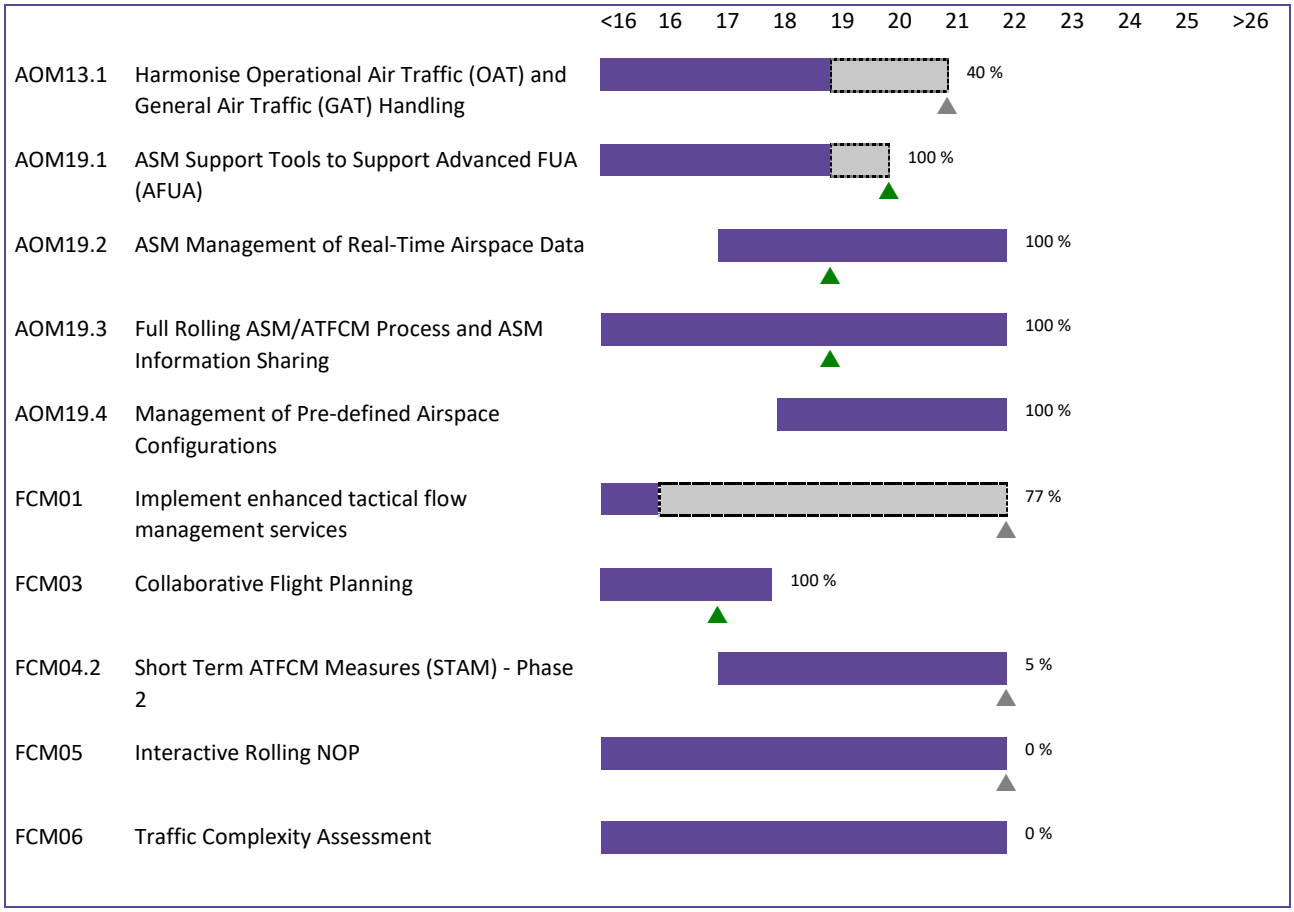
The Implementation objectives progress charts per Key Feature below show progress only for Implementation Objectives applicable to the State and which are not local objectives.

Note: The detailed table of links between Implementation Objectives and SESAR Key Features is available in Annex C: Implementation Objectives' links with SESAR, ICAO and DP.

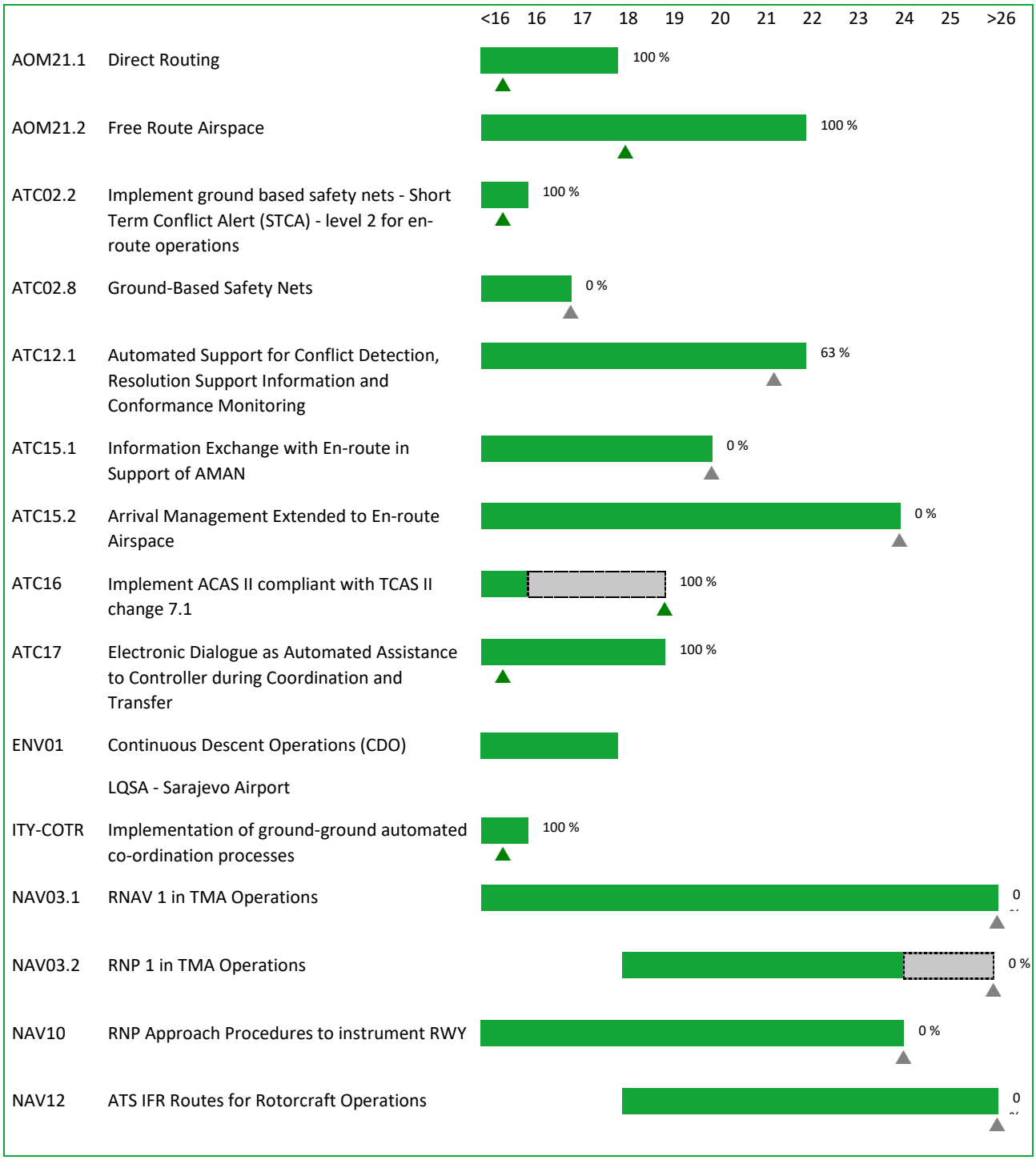
Legend:

- ## % = Expected completion / % Progress
- 100% = Objective completed
- = Implementation Objective timeline (different colour per KF)
- = Completion beyond Implementation Objective timeline

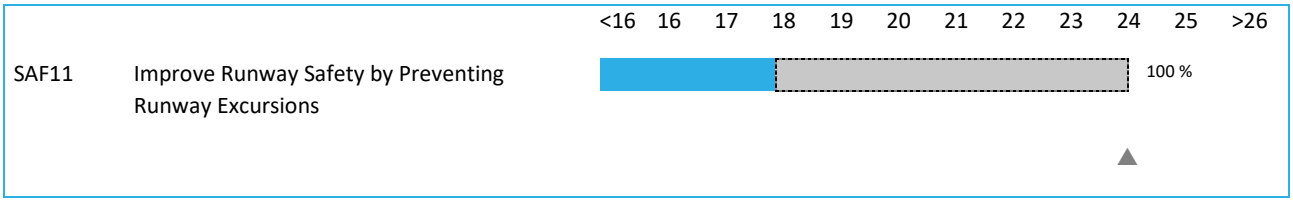
Optimised ATM Network Services



Advanced Air Traffic Services



High Performing Airport Operations



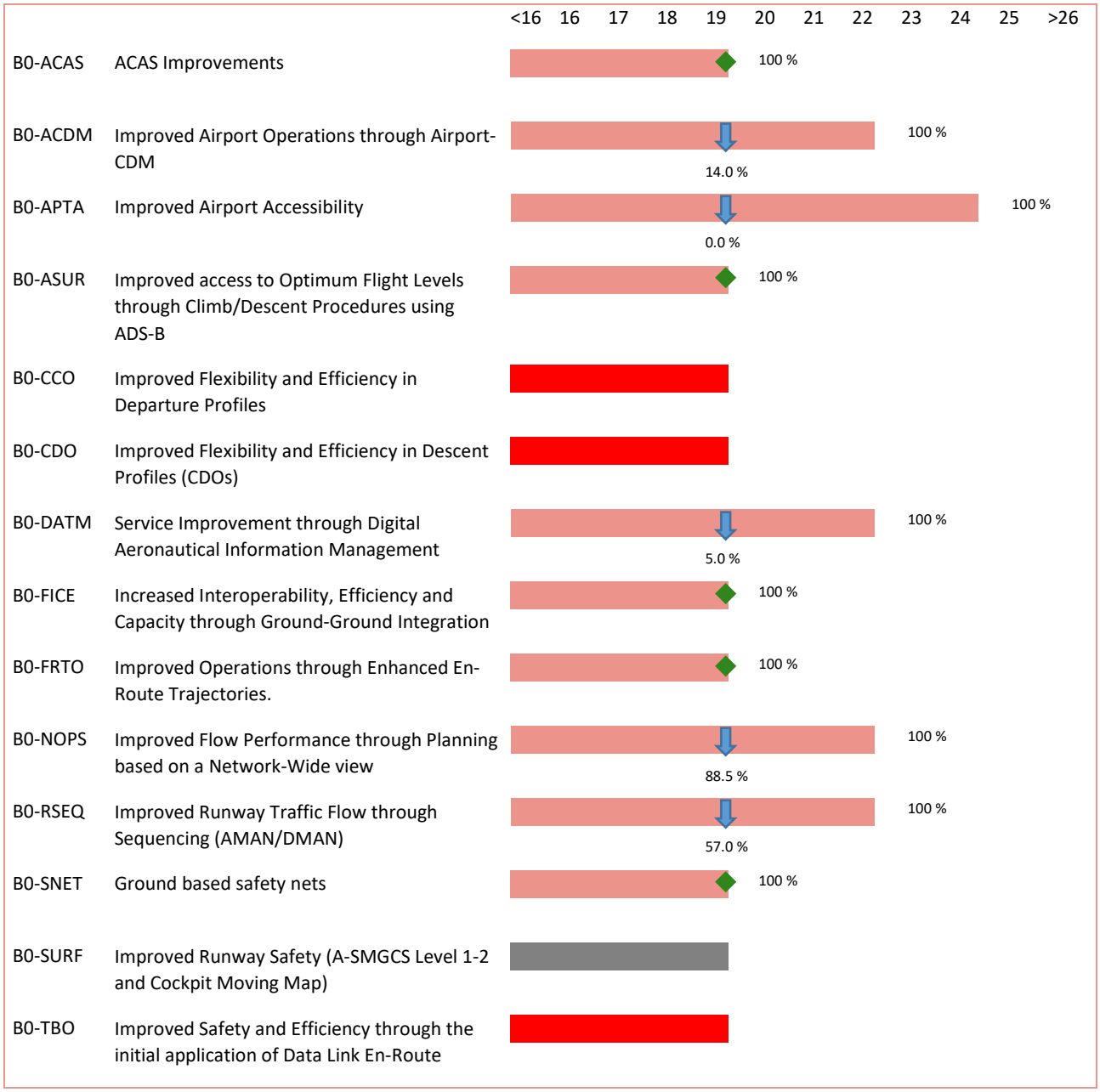
Enabling Aviation Infrastructure

5.3. ICAO ASBU Implementation Progress

The following table shows, for each of the ASBU Block 0 modules, the overall status, the final date foreseen for completion and the percentage of progress achieved in the current cycle.

These results were determined using the LSSIP Year 2019 declared statuses and progress of the relevant Implementation objectives in accordance with the mapping approved by the ICAO EUR EASPG/1 meeting (European Aviation System Planning Group).

Legend:



5.4. Detailed Objectives Implementation progress

Objective/Stakeholder Progress Code:			
Completed		Not yet planned	
Ongoing		Not Applicable	
Planned		Missing Data	
Late			

Main Objectives

AOM13.1	**Harmonise Operational Air Traffic (OAT) and General Air Traffic (GAT) Handling** ***Timescales:*** Initial operational capability: 01/01/2012 Full operational capability: 31/12/2018		**40%**	**Late**
Key Feature: Optimised ATM Network Services				
-				
Even though the military arial activities are limited to the helicopter flights, BH intends to harmonise OAT and GAT handling. The full implementation is foreseen for the end of the objective deployment date allowing newly established BHANSA to become fully capacitated for the implementation.				**31/12/2020**
REG (By:12/2018)				
BHDCA	late	-	0%	Late 31/12/2020
ASP (By:12/2018)				
BHANSA	BHANSA completed objective	-	100%	Completed 31/12/2018
MIL (By:12/2018)				
Mil. Authority	MoD and BHANSA signed an agreement with seven annexes on 27 January 2016 in order to Harmonise Operational Air Traffic (OAT) and General Air Traffic (GAT) Handling	-	13%	Late 31/12/2020

AOM19.1	**ASM Support Tools to Support Advanced FUA (AFUA)** ***Timescales:*** Initial operational capability: 01/01/2011 Full operational capability: 31/12/2018		**100%**	**Completed**
Links: B1-FRTO, B1-NOPS | Key Feature: Optimised ATM Network Services				
-				
LARA agreement signed in early 2018, procurement and validation took place in 2018				**31/12/2019**
ASP (By:12/2018)				
BHANSA	LARA agreement signed in early 2018, implemented	-	100%	Completed 31/12/2019

AOM19.2	**ASM Management of Real-Time Airspace Data** ***Timescales:*** Initial operational capability: 01/01/2017 Full operational capability: 31/12/2021		**100%**	**Completed**
Links: B1-FRTO, B1-NOPS | Key Feature: Optimised ATM Network Services				
-				
-				**31/12/2018**
ASP (By:12/2021)				
BHANSA	completed	-	100%	Completed 31/12/2018

AOM19.3	**Full Rolling ASM/ATFCM Process and ASM Information Sharing** ***Timescales:*** Initial operational capability: 01/01/2014 Full operational capability: 31/12/2021		**100%**	**Completed**
Links: B0-FRTO, B1-FRTO, B1-NOPS, B2-NOPS | Key Feature: Optimised ATM Network Services				
-				
Alignment with the AMC implementation and LARA tool.				**31/12/2018**
ASP (By:12/2021)				
BHANSA	Alignment with the AMC implementation and LARA tool.	-	100%	Completed 31/12/2018

AOM19.4	**Management of Pre-defined Airspace Configurations** ***Timescales:*** Initial operational capability: 01/01/2018 Full operational capability: 31/12/2021		**100%**	**Completed**
Links: B1-FRTO, B1-NOPS | Key Feature: Optimised ATM Network Services				
-				
completed				-
ASP (By:12/2021)				
BHANSA	Completed	-	100%	Completed -

AOM21.2	**Free Route Airspace** ***Timescales:*** Initial operational capability: 01/01/2015 Full operational capability: 31/12/2021	**100%**	**Completed**
Links: B0-FRTO, B1-FRTO | Key Feature: Advanced Air Traffic Services			
-			
BHANSA is part of SEAFRA, FRA environment consisting of airspace of 4 states (Croatia, Bosnia and Herzegovina, Serbia and Montenegro) and 3 ANSP (CROCONTROL, BHANSA and SMATSA). Following SEAFRA H24 implementation by 08/12/2016 for all traffic above FL 325 (above the FIR Sarajevo), the FRA operations were extended down to above FL 205 inside the FIR Sarajevo from 01/02/2018. **SEAFRA is also now co-operated with SAXFRA from other FAB CE States (Austria, Slovenia).**			**01/02/2018**
ASP (By:12/2021)			
BHANSA	BHANSA is part of SEAFRA, FRA environment consisting of airspace of 4 states (Croatia, Bosnia and Herzegovina, Serbia and Montenegro) and 3 ANSP (CROCONTROL, BHANSA and SMATSA). Following SEAFRA H24 implementation by 08/12/2016 for all traffic above FL 325 (above the FIR Sarajevo), the FRA operations were extended down to above FL 205 inside the FIR Sarajevo from 01/02/2018. SEAFRA is also now co-operated with SAXFRA from other FAB CE States (Austria, Slovenia)	Airspace Task Force / DEVOPS: FABCE Development of Operational Performance and ATM Strategies (previously Project 1) / Upgrade DPS	100%	Completed 01/02/2018

AOP04.1	**Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)** ***Timescales:*** - not applicable -		**%**	**Not Applicable**
Links: B0-SURF | Key Feature: High Performing Airport Operations				
LQSA - Sarajevo Airport **(Outside Applicability Area)**				
Not applicable to LQSA				**-**
REG (By:12/2010)				
BHDCA	Not applicable to Sarajevo airport-	-	%	Not Applicable -
ASP (By:12/2011)				
BHANSA	Not applicable to Sarajevo airport-	-	%	Not Applicable -
APO (By:12/2010)				

AOP04.2	**Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)** ***Timescales:*** - not applicable -		**%**	**Not Applicable**
Links: B0-SURF | Key Feature: High Performing Airport Operations				
LQSA - Sarajevo Airport **(Outside Applicability Area)**				
Not applicable to Sarajevo airport-				**-**
ASP (By:12/2017)				
BHANSA	Not applicable to Sarajevo airport-	-	%	Not Applicable -
APO (By:12/2017)				

AOP05	**Airport Collaborative Decision Making (A-CDM)** ***Timescales:*** - not applicable -		**14%**	**Late**
Links: B0-ACDM, B0-RSEQ | Key Feature: High Performing Airport Operations				
LQSA - Sarajevo Airport **(Outside Applicability Area)**				
-				**31/12/2021**
ASP (By:12/2016)				
BHANSA	-	-	18%	Late 31/12/2020
APO (By:12/2016)				
SARAJEVO Airport	Planned by Businesses Plan for 2019-2020, and next consecutive three years. Zijadić ATM Master Plan – Aeronautički projekti AOP05 - LSSIP	-	10%	Late 31/12/2021

AOP10	**Time-Based Separation** ***Timescales:*** - not applicable -		**%**	**Not Applicable**
Links: B1-RSEQ, B2-WAKE | Key Feature: High Performing Airport Operations				
LQSA - Sarajevo Airport **(Outside Applicability Area)**				
Not applicable to Sarajevo airport.(LQSA not PCP airport)				**-**
REG (By:12/2023)				
BHDCA	LQSA not PCP airport	-	%	Not Applicable -
ASP (By:12/2023)				
BHANSA	LQSA not PCP airport	-	%	Not Applicable -

AOP11	Initial Airport Operations Plan *Timescales:* - not applicable -		0%	Not yet planned
Links: B1-ACDM | Key Feature: High Performing Airport Operations				
LQSA - Sarajevo Airport **(Outside Applicability Area)**				
				-
ASP (By:12/2021)				
BHANSA	Not yet planned	-	0%	Not yet planned -
APO (By:12/2021)				
SARAJEVO Airport	Not yet planned.	-	0%	Not yet planned -

AOP12	Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC) *Timescales:* - not applicable -		%	Not Applicable
Links: B2-SURF | Key Feature: High Performing Airport Operations				
LQSA - Sarajevo Airport **(Outside Applicability Area)**				
Not applicable.				-
ASP (By:12/2020)				
SARAJEVO Airport	N/A	-	%	Not Applicable -
BHANSA	not applicable	-	%	Not Applicable -
APO (By:12/2020)				
SARAJEVO Airport	N/A	-	%	Not Applicable -

AOP13	Automated Assistance to Controller for Surface Movement Planning and Routing *Timescales:* - not applicable -		%	Not Applicable
Links: B1-ACDM, B1-RSEQ, B2-SURF | Key Feature: High Performing Airport Operations				
LQSA - Sarajevo Airport **(Outside Applicability Area)**				
Not applicable				-
REG (By:12/2023)				
BHDCA	Not applicable	-	%	Not Applicable -
ASP (By:12/2023)				
BHANSA	Not Applicable	-	%	Not Applicable -

ATC02.8	**Ground-Based Safety Nets** ***Timescales:*** Initial operational capability: 01/01/2009 Full operational capability: 31/12/2016		**0%**	**Not yet planned**
Links: B0-SNET, B1-SNET | Key Feature: Advanced Air Traffic Services				
-				
Not yet planned.				-
ASP (By:12/2016)				
BHANSA	BHANSA upgraded ATC system and now there is no this functionality APW function is no implemented in new upgraded the ATC system . APM function is no implemented in new upgraded the ATC system	-	0%	Not yet planned -

ATC02.9	**Short Term Conflict Alert (STCA) for TMAs** **(Outside Applicability Area)** ***Timescales:*** - not applicable -		**100%**	**Completed**
Links: B0-SNET, B1-SNET | Key Feature: Advanced Air Traffic Services				
-				
All TMAs in SARAJEVO FIR are class E, and this objective is not relevant for implementation				-
ASP (By:12/2020)				
BHANSA	completed	-	100%	Completed -

ATC07.1	**AMAN Tools and Procedures** ***Timescales:*** - not applicable -		**%**	**Not Applicable**
Links: B0-RSEQ | Key Feature: Advanced Air Traffic Services				
LQSA - Sarajevo Airport **(Outside Applicability Area)**				
Bosnia and Herzegovina is outside the applicability area. At this stage, there is no plan to implement arrival tools. The main complexity with Sarajevo airport is the interaction between arrival and departure traffic flows. There is no operational justification for the implementation of this objective.				-
ASP (By:12/2019)				
BHANSA	At this stage, there is no plan to implement arrival tools. The main complexity with Sarajevo airport is the interaction between arrival and departure traffic flows. There is no operational justification for the implementation of this objective.	-	%	Not Applicable -

ATC12.1	**Automated Support for Conflict Detection, Resolution Support Information and Conformance Monitoring** ***Timescales:*** Initial operational capability: 01/01/2015 Full operational capability: 31/12/2021		**63%**	**Ongoing**
Links: B1-FRTO | Key Feature: Advanced Air Traffic Services				
-				
According to plans, FDPS system is expected to be updated by 2019, and MTCD function is one of the requirement				**25/04/2021**
ASP (By:12/2021)				
BHANSA	According to plans, FDPS system is expected to be updated by 2019, and MTCD function is one of the requirement	-	63%	Ongoing 25/04/2021

ATC15.1	**Information Exchange with En-route in Support of AMAN** ***Timescales:*** Initial operational capability: 01/01/2012 Full operational capability: 31/12/2019		**0%**	**Not yet planned**
Links: B1-RSEQ | Key Feature: Advanced Air Traffic Services				
-				
No plan at present due to lack of needs from adjacent ATSUs.				**-**
ASP (By:12/2019)				
BHANSA	No plan at present due to lack of needs from adjacent ATSUs. Its possible implementation will be periodically assessed	-	0%	Not yet planned -

ATC15.2	**Arrival Management Extended to En-route Airspace** ***Timescales:*** Full operational capability: 31/12/2023		**0%**	**Not yet planned**
Links: B1-RSEQ | Key Feature: Advanced Air Traffic Services				
-				
No plan at present due to lack of needs from adjacent ATSUs.				**-**
ASP (By:12/2023)				
BHANSA	not yet planned	-	0%	Not yet planned -

ATC17	**Electronic Dialogue as Automated Assistance to Controller during Coordination and Transfer** ***Timescales:*** Initial operational capability: 01/01/2013 Full operational capability: 31/12/2018		**100%**	**Completed**
Key Feature: Advanced Air Traffic Services				
-				
OLDI function is implemented in the ATC system, supporting electronic coordination and transfer				**13/11/2014**
ASP (By:12/2018)				
BHANSA	OLDI function is implemented in the ATC system, supporting electronic coordination and transfer	-	100%	Completed 13/11/2014

COM10	**Migrate from AFTN to AMHS** ***Timescales:*** Initial operational capability: 01/12/2011 Full operational capability: 31/12/2018		**47%**	**Late**
Key Feature: Enabling the Aviation Infrastructure				
-				
Will be completed in Q2 2020.				**05/03/2020**
ASP (By:12/2018)				
BHANSA	Will be completed in Q2 2020	New AMHS	47%	Late 05/03/2020

COM11.1	**Voice over Internet Protocol (VoIP) in En-Route** ***Timescales:*** Initial operational capability: 01/01/2013 Full operational capability: 31/12/2021		**0%**	**Planned**
Key Feature: Enabling the Aviation Infrastructure				
-				
New VCS system being commissioned may support future implementation of VoIP technology BHANSA plans to partly implement VoIP ground-ground communication by the end of 2020.				**31/12/2020**
ASP (By:12/2021)				
BHANSA	New VCS system being commissioned may support future implementation of VoIP technology BHANSA plans to partly implement VoIP ground-ground communication by the end of 2020.	New Radio Stations (APP) / New Radio stations and sites (ACC) / New VCS (ACC) / New VCS (APP)	0%	Planned 31/12/2020

COM11.2	**Voice over Internet Protocol (VoIP) in Airport/Terminal** ***Timescales:*** Initial operational capability: 01/01/2013 Full operational capability: 31/12/2023		**0%**	**Not yet planned**
Key Feature: Enabling the Aviation Infrastructure				
-				
-				-
ASP (By:12/2023)				
BHANSA	not yet planned	-	0%	Not yet planned -

COM12	**New Pan-European Network Service (NewPENS)** ***Timescales:*** Initial operational capability: 01/01/2018 Full operational capability (33 ANSPs): 31/12/2020		**0%**	**Not yet planned**
Links: B1-SWIM | Key Feature: Enabling the Aviation Infrastructure				
-				
BHANSA has no plan for implementation at the moment.				**-**
ASP (By:12/2024)				
BHANSA	BHANSA has no plan for implementation at the moment.	-	0%	Not yet planned -
APO (By:12/2024)				
SARAJEVO Airport		-	0%	Not yet planned -

ENV01	**Continuous Descent Operations (CDO)** ***Timescales:*** Initial operational capability: 01/07/2007 Full operational capability: 31/12/2023		**0%**	**Not yet planned**
Links: B0-CDO, B1-CDO | Key Feature: Advanced Air Traffic Services				
LQSA - Sarajevo Airport				
Initial CDO implementation activities took place back to 2013. There is at the moment no further plan to develop and finalize CDO implementation at Sarajevo airport. Airspace constraints are also limiting to scope of CDO operations.				**-**
ASP (By:12/2023)				
BHANSA	There is at the moment no further plan to develop and finalize CDO implementation at Sarajevo airport. Airspace constraints are also limiting to scope of CDO operations.	-	0%	Not yet planned -
APO (By:12/2023)				
SARAJEVO Airport	-	-	0%	Not yet planned -

FCM03	**Collaborative Flight Planning** ***Timescales:*** Initial operational capability: 01/01/2000 Full operational capability: 31/12/2017		**100%**	**Completed**
Links: B0-NOPS | Key Feature: Optimised ATM Network Services				
-				
Objective implemented.				**01/01/2017**
ASP (By:12/2017)				
BHANSA	Objective implemented.	-	100%	Completed 01/01/2017

FCM04.2	**Short Term ATFCM Measures (STAM) - Phase 2** ***Timescales:*** Full operational capability: 31/12/2021		**5%**	**Ongoing**
Key Feature: Optimised ATM Network Services				
-				
Initial actions have started as part of FAB CE DAM/STAM Project (ex. P3). It is likely that STAM phase 2 will be implemented with the availability of this function in the N-connect Tool, planned for implementation end of 2021.				**31/12/2021**
ASP (By:12/2021)				
BHANSA	BHANSA is expected to meet the objective within the targeted timeframe	-	5%	Ongoing 31/12/2021

FCM05	**Interactive Rolling NOP** ***Timescales:*** Initial operational capability: 01/09/2013 Full operational capability: 31/12/2021		**0%**	**Planned**
Links: B1-ACDM, B1-NOPS | Key Feature: Optimised ATM Network Services				
-				
The elements and formats of the NOP will be established taking into account the requirements of the users. **Implementation of interactive rolling NOP is planned through upgrade of the automated ASM support system with the capability of AIXM 5.1 B2B data exchange with NM and Perform an integration of the automated ASM support systems with the Network. All these projects will be fulfilled in accordance with the NM support, the guidance and the relevant provisions of the NM B2B Reference Manuals.**				**31/12/2021**
ASP (By:12/2021)				
BHANSA	BHANSA is expected to meet the objective within the targeted timeframe	-	0%	Planned 31/12/2021
APO (By:12/2021)				
SARAJEVO Airport	-	-	0%	Planned 31/12/2021

FCM06	**Traffic Complexity Assessment** ***Timescales:*** Full operational capability: 31/12/2021		**0%**	**Not yet planned**
Links: B1-NOPS | Key Feature: Optimised ATM Network Services				
-				
No plan at present.				**-**
ASP (By:12/2021)				
BHANSA	No plan at present.	-	0%	Not yet planned -

FCM08	**Extended Flight Plan** ***Timescales:*** Initial operational capability: 01/01/2016 Full operational capability: 31/12/2021		**0%**	**Not yet planned**
Links: B1-FICE | Key Feature: Enabling the Aviation Infrastructure				
-				
No plan at present.				-
ASP (By:12/2021)				
BHANSA	No Plan	-	0%	Not yet planned -

INF07	**Electronic Terrain and Obstacle Data (eTOD)** ***Timescales:*** Initial operational capability: 01/11/2014 Full operational capability: 31/05/2018		**1%**	**Late**
Key Feature: Enabling the Aviation Infrastructure				
-				
Directorate of Civil Aviation of Bosnia and Herzegovina (BHDCA) plans to implement and establish National TOD policy during 2018.				**31/12/2023**
REG (By:05/2018)				
BHDCA	Directorate of Civil Aviation of Bosnia and Herzegovina (BHDCA) plans to establish and implement National TOD policy during 2019 Draft of the National TOD Policy has been made in 2018.	-	0%	Late 31/12/2023
ASP (By:05/2018)				
BHANSA	late	-	5%	Late 31/12/2023
APO (By:05/2018)				
SARAJEVO Airport	-	-	0%	Late 31/12/2023

INF08.1	**Information Exchanges using the SWIM Yellow TI Profile** ***Timescales:*** - not applicable -		**%**	**Not yet planned**
Links: B1-DATM, B1-SWIM | Key Feature: Enabling the Aviation Infrastructure				
-				
Not yet planned.				-
ASP (By:12/2024)				
BHANSA	Not yet planned.	-	%	Not yet planned -
MIL (By:12/2024)				
Mil. Authority	Not yet planned.	-	%	Not yet planned -
APO (By:12/2024)				
SARAJEVO Airport	-	-	%	Not yet planned -

ITY-ACID	**Aircraft Identification** ***Timescales:*** Entry into force of the Regulation: 13/12/2011 System capability: 02/01/2020		**100%**	**Completed**
Key Feature: Enabling the Aviation Infrastructure				
-				
Line of action will be in accordance with the time frame (till 2020).				**02/01/2020**
ASP (By:01/2020)				
BHANSA	Upgrade DPS New ARTAS system	New ARTAS system / Upgrade DPS	100%	Completed 02/01/2020

ITY-ADQ	**Ensure Quality of Aeronautical Data and Aeronautical Information** ***Timescales:*** Entry into force of the regulation: 16/02/2010 Article 5(4)(a), Article 5(4)(b) and Article 6 to 13 to be implemented by: 30/06/2013 Article 4, Article5(1) and Article 5(2), Article 5(3) and Article 5(4)(c) to be implemented by: 30/06/2014 All data requirements implemented by: 30/06/2017		**5%**	**Late**
Links: B0-DATM | Key Feature: Enabling the Aviation Infrastructure				
-				
Regulation (EU) 73/2010 has been transposed in national legislation (published in Official Gazette of Bosnia and Herzegovina under the number 61/14 and 9/18), but not implemented yet.				**31/12/2021**
REG (By:06/2017)				
BHDCA	Regulation (EU) 73/2010 has been transposed in national legislation (published in Official Gazette of Bosnia and Herzegovina under the number 61/14 and 9/18), but not implemented yet.	-	0%	Late 31/12/2021
ASP (By:06/2017)				
BHANSA	Implementation planned. Complete implementation plan depends on the prerequisites stated under implementation issues. BHANSA would need to adjust its plans and actions.	-	0%	Late 31/12/2021
APO (By:06/2017)				
SARAJEVO Airport	-	-	15%	Late 31/12/2021

ITY-AGDL	**Initial ATC Air-Ground Data Link Services** ***Timescales:*** ATS unit operational capability: 05/02/2018 Aircraft capability: 05/02/2020		**0%**	**Not yet planned**
Links: B0-TBO | Key Feature: Enabling the Aviation Infrastructure				
-				
No plan at the moment.				**-**
REG (By:02/2018)				
BHDCA	No plan at the moment.	-	0%	Not yet planned -
ASP (By:02/2018)				
BHANSA	No plan at the moment	-	0%	Not yet planned -
MIL (By:01/2019)				
Mil. Authority	Military do no provide ATC service to civil flights	-	%	Not Applicable -

ITY-AGVCS2	**8,33 kHz Air-Ground Voice Channel Spacing below FL195** ***Timescales:*** Entry into force: 07/12/2012 New and upgraded radio equipment: 17/11/2013 New or upgraded radios on State aircraft: 01/01/2014 Interim target for freq. conversions: 31/12/2014 All radio equipment: 31/12/2017 All frequencies converted: 31/12/2018 State aircraft equipped, except those notified to EC: 31/12/2018 State aircraft equipped, except those exempted [Art 9(11)]: 31/12/2020		**0%**	**Late**
Key Feature: Enabling the Aviation Infrastructure				
-				
Radio stations will be replaced by the end of 2021.				**31/12/2023**
REG (By:12/2018)				
BHDCA	Regulation (EU) No 1079/2012 is not transposed in BH legislation. Radio stations will be replaced by the end of 2021.	-	0%	Late 31/12/2021
ASP (By:12/2018)				
BHANSA	BHANSA will replace radio stations by the end of 2021.	New Radio Stations (APP) / New Radio stations and sites (ACC)	0%	Late 31/12/2021
MIL (By:12/2020)				
Mil. Authority	n/a	New Military Radio stations	%	Not Applicable -
APO (By:12/2018)				
SARAJEVO Airport	-	-	0%	Not yet planned -

ITY-FMTP	**Common Flight Message Transfer Protocol (FMTP)** ***Timescales:*** Entry into force of regulation: 28/06/2007 All EATMN systems put into service after 01/01/09: 01/01/2009 All EATMN systems in operation by 20/04/11: 20/04/2011 Transitional arrangements: 31/12/2012 Transitional arrangements when bilaterally agreed between ANSPs: 31/12/2014		**100%**	**Completed**
Links: B0-FICE, B1-FICE | Key Feature: Enabling the Aviation Infrastructure				
-				
FMTP was implemented in November2014.				**31/12/2014**
ASP (By:12/2014)				
BHANSA	FMTP was implemented in November2014.	-	100%	Completed 31/12/2014
MIL (By:12/2014)				
Mil. Authority	Military do no provide ATC service to civil flights	-	%	Not Applicable -

ITY-SPI	**Surveillance Performance and Interoperability** ***Timescales:*** Entry into force of regulation: 13/12/2011 ATS unit operational capability: 12/12/2013 EHS and ADS-B Out in transport-type State aircraft : 07/06/2020 ELS in transport-type State aircraft : 07/06/2020 Ensure training of MIL personnel: 07/06/2020 Retrofit aircraft capability: 07/06/2020		**100%**	**Completed**
Links: B0-ASUR | Key Feature: Enabling the Aviation Infrastructure				
-				
The objective is planned to be completed by end of 2020.				**25/04/2019**
REG (By:02/2015)				
BHDCA	.	-	100%	Completed 25/04/2019
ASP (By:02/2015)				
BHANSA	-	New ARTAS system / Upgrade DPS	100%	Completed 25/04/2019
MIL (By:06/2020)				
Mil. Authority	not applicable	-	%	Not Applicable -

NAV03.1	**RNAV 1 in TMA Operations** ***Timescales:*** Initial operational capability: 01/01/2001 Locally determined number of RNAV1 SID/STAR, where established: 06/06/2030		**0%**	**Not yet planned**
Links: B0-CCO, B0-CDO, B1-RSEQ | Key Feature: Advanced Air Traffic Services				
-				
No plan.				**-**
REG (By:06/2030)				
BHDCA	-	-	%	Not yet planned -
ASP (By:06/2030)				
BHANSA	No plan	-	0%	Not yet planned -

NAV03.2	**RNP 1 in TMA Operations** ***Timescales:*** Start: 07/08/2018 Locally determined number of RNP1 SID/STAR, where established.: 06/06/2030		**0%**	**Planned**
Links: B1-RSEQ | Key Feature: Advanced Air Traffic Services				
-				
No plan.				**31/12/2025**
REG (By:06/2030)				
BHDCA	-	-	0%	Planned 31/12/2025
ASP (By:06/2030)				
BHANSA	No plan.	-	0%	Planned 31/12/2025

NAV10	**RNP Approach Procedures to instrument RWY** ***Timescales:*** Initial operational capability: 01/06/2011 Instrument RWY ends served by precision approach (including PCP airports): 25/01/2024 Instrument RWY ends without precision approach at other ECAC+ instrument RWYs.: 25/01/2024		**0%**	**Planned**
Links: B0-APTA | Key Feature: Advanced Air Traffic Services				
-				
Planned				**25/01/2024**
REG (By:01/2024)				
BHDCA	Planned	-	0%	Planned 25/01/2024
ASP (By:01/2024)				
BHANSA	Planned	-	0%	Planned 25/01/2024

NAV12	**ATS IFR Routes for Rotorcraft Operations** ***Timescales:*** IFR ATS route above/below FL150, SID and STAR for Rotorcraft Operations, where established: 06/06/2030		**%**	**Not yet planned**
Links: B1-APTA | Key Feature: Advanced Air Traffic Services				
-				
No plan at the moment.				**-**
REG (By:06/2030)				
BHDCA	Not yet planned	-	%	Not yet planned -
ASP (By:06/2030)				
BHANSA	Not yet planned	-	%	Not yet planned -

SAF11	**Improve Runway Safety by Preventing Runway Excursions** ***Timescales:*** Initial operational capability: 01/09/2013 Full operational capability: 31/01/2018		**62%**	**Late**
Key Feature: High Performing Airport Operations				
-				
The implementation of the European Action Plan for the Prevention of Runway Excursions is planned by 2020.				**25/01/2024**
REG (By:01/2018)				
BHDCA	Established the oversight activities, planned by 2020.	-	0%	Late 31/12/2020
ASP (By:12/2014)				
BHANSA	Completed	-	100%	Completed 31/12/2019
APO (By:12/2014)				
SARAJEVO Airport	in progress	-	10%	Late 25/01/2024

Additional Objectives for ICAO ASBU Monitoring

AOM21.1	**Direct Routing** ***Timescales:*** Initial Operational Capability: 01/01/2015 Full Operational Capability: 31/12/2017		**100%**	**Completed**
Links: B0-FRTO, B1-FRTO | Key Feature: Advanced Air Traffic Services				
-				
Direct routing has been completely implemented in the Sarajevo FIR and BHANSA AoR				**15/04/2014**
ASP (By:12/2017)				
BHANSA	Direct routing has been completely implemented in the Sarajevo FIR and BHANSA AoR	-	100%	Completed 15/04/2014

ATC02.2	**Implement ground based safety nets - Short Term Conflict Alert (STCA) - level 2 for en-route operations** ***Timescales:*** Initial operational capability: 01/01/2008 Full operational capability: 31/01/2013		**100%**	**Completed**
Links: B0-SNET | Key Feature: Advanced Air Traffic Services				
-				
STCA function available in ATC system and operationally used				**13/11/2014**
ASP (By:01/2013)				
BHANSA	STCA function available in ATC system and operationally used	-	100%	Completed 13/11/2014

ATC16	**Implement ACAS II compliant with TCAS II change 7.1** ***Timescales:*** Initial operational capability: 01/03/2012 Full operational capability: 31/12/2015		**100%**	**Completed**
Links: B0-ACAS | Key Feature: Advanced Air Traffic Services				
-				
The performance monitoring of ACAS in the ATC environment is part of the incident occurrence reporting, investigation and analysis process established by BHANSA.				**31/12/2018**
REG (By:12/2015)				
BHDCA	EU regulation 1332/2011 is not transposed in B&H legislation, not implemented in Bosnia and Herzegovina yet.	-	100%	Completed 31/12/2018
ASP (By:03/2012)				
BHANSA	The performance monitoring of ACAS in the ATC environment is part of the incident occurrence reporting, investigation and analysis process established.	-	100%	Completed 31/12/2017
MIL (By:12/2015)				
Mil. Authority	n/a	-	%	Not Applicable -

FCM01	**Implement enhanced tactical flow management services** ***Timescales:*** Initial operational capability: 01/08/2001 Full operational capability: 31/12/2006		**77%**	**Late**
Links: B0-NOPS | Key Feature: Optimised ATM Network Services				
-				
Planned by end of 2021.				**31/12/2021**
ASP (By:07/2014)				
BHANSA	Planned by end 2021	-	77%	Late 31/12/2021

ITY-COTR	**Implementation of ground-ground automated co-ordination processes** ***Timescales:*** Entry into force of Regulation: 27/07/2006 For putting into service of EATMN systems in respect of notification and initial coordination processes: 27/07/2006 For putting into service of EATMN systems in respect of Revision of Coordination, Abrogation of Coordination, Basic Flight Data and Change to Basic Flight Data: 01/01/2009 To all EATMN systems in operation by 12/2012: 31/12/2012		**100%**	**Completed**
Links: B0-FICE | Key Feature: Advanced Air Traffic Services				
-				
OLDI function is implemented in the ATC system, supporting ground-ground coordination and transfer processes				**13/11/2014**
ASP (By:12/2012)				
BHANSA	OLDI function is implemented in the ATC system, supporting ground-ground coordination and transfer processes	-	100%	Completed 13/11/2014
MIL (By:12/2012)				
Mil. Authority	Military do no provide ATC service to civil flights	-	%	Not Applicable -

Local Objectives

Note: Local Objectives are addressing solutions that are considered beneficial for specific operating environments, therefore for which a clear widespread commitment has not been expressed yet. They are characterised with no deadline and voluntary applicability area.

AOP14	Remote Tower Services *Applicability and timescale: Local*	%	Not Applicable
Links: B1-RATS | Key Feature: High Performing Airport Operations			
LQSA - Sarajevo Airport			
not applicable			-

AOP15	Enhanced traffic situational awareness and airport safety nets for the vehicle drivers *Applicability and timescale: Local*	%	Not yet planned
Links: B2-SURF | Key Feature: High Performing Airport Operations			
LQSA - Sarajevo Airport			
Not yet planned			-

AOP16	Guidance assistance through airfield ground lighting *Applicability and timescale: Local*	%	Not Applicable
Links: B1-RSEQ, B2-SURF | Key Feature: High Performing Airport Operations			
LQSA - Sarajevo Airport			
Not applicable			-

AOP17	Provision/integration of departure planning information to NMOC *Applicability and timescale: Local*	%	Not Applicable
Links: B1-ACDM, B1-NOPS | Key Feature: High Performing Airport Operations			
LQSA - Sarajevo Airport			
Not applicable			-

AOP18	Runway Status Lights (RWSL) *Applicability and timescale: Local*	%	Not Applicable
Links: B2-SURF | Key Feature: High Performing Airport Operations			
LQSA - Sarajevo Airport			
Not applicable			-

ATC18	Multi-Sector Planning En-route - 1P2T *Applicability and timescale: Local*	%	Not Applicable
Key Feature: Advanced Air Traffic Services			
-			
not applicable			25/04/2019

ATC19	Enhanced AMAN-DMAN integration *Applicability and timescale: Local*	%	Not Applicable
Links: B2-RSEQ | Key Feature: Advanced Air Traffic Services			
-			
not applicable			-

ATC20	Enhanced STCA with down-linked parameters via Mode S EHS *Applicability and timescale: Local*	%	Not Applicable
Links: B1-SNET | Key Feature: Advanced Air Traffic Services			
-			
not applicable			-

ENV02	Airport Collaborative Environmental Management *Applicability and timescale: Local*	%	Not yet planned
Key Feature: High Performing Airport Operations			
LQSA - Sarajevo Airport			
not yet planned			-

ENV03	Continuous Climb Operations (CCO) *Applicability and timescale: Local*	%	Not yet planned
Links: B0-CCO | Key Feature: Advanced Air Traffic Services			
LQSA - Sarajevo Airport			
not yet planned			-

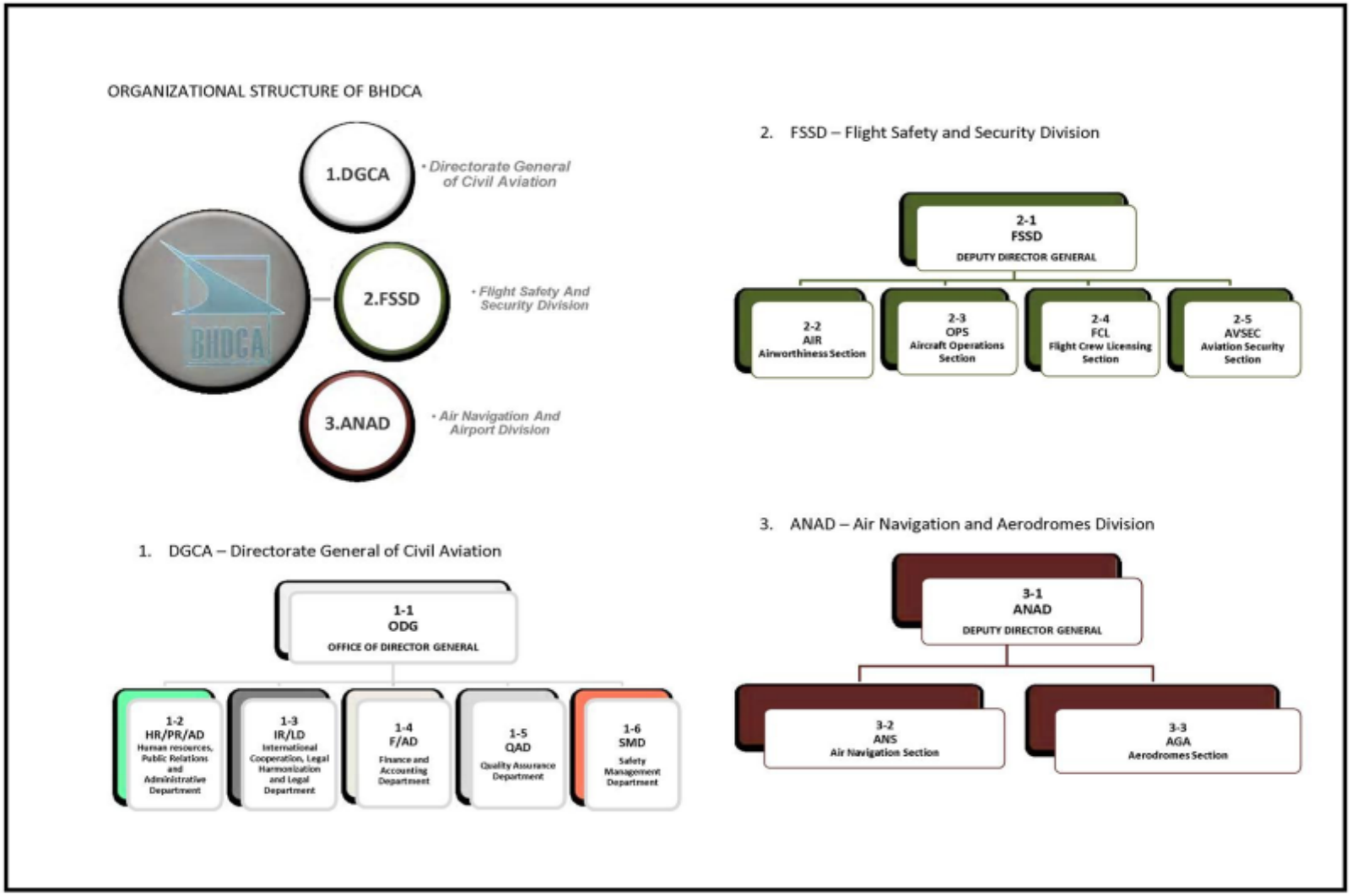
6. Annexes

A. Specialists involved in the ATM implementation reporting for Bosnia and Herzegovina

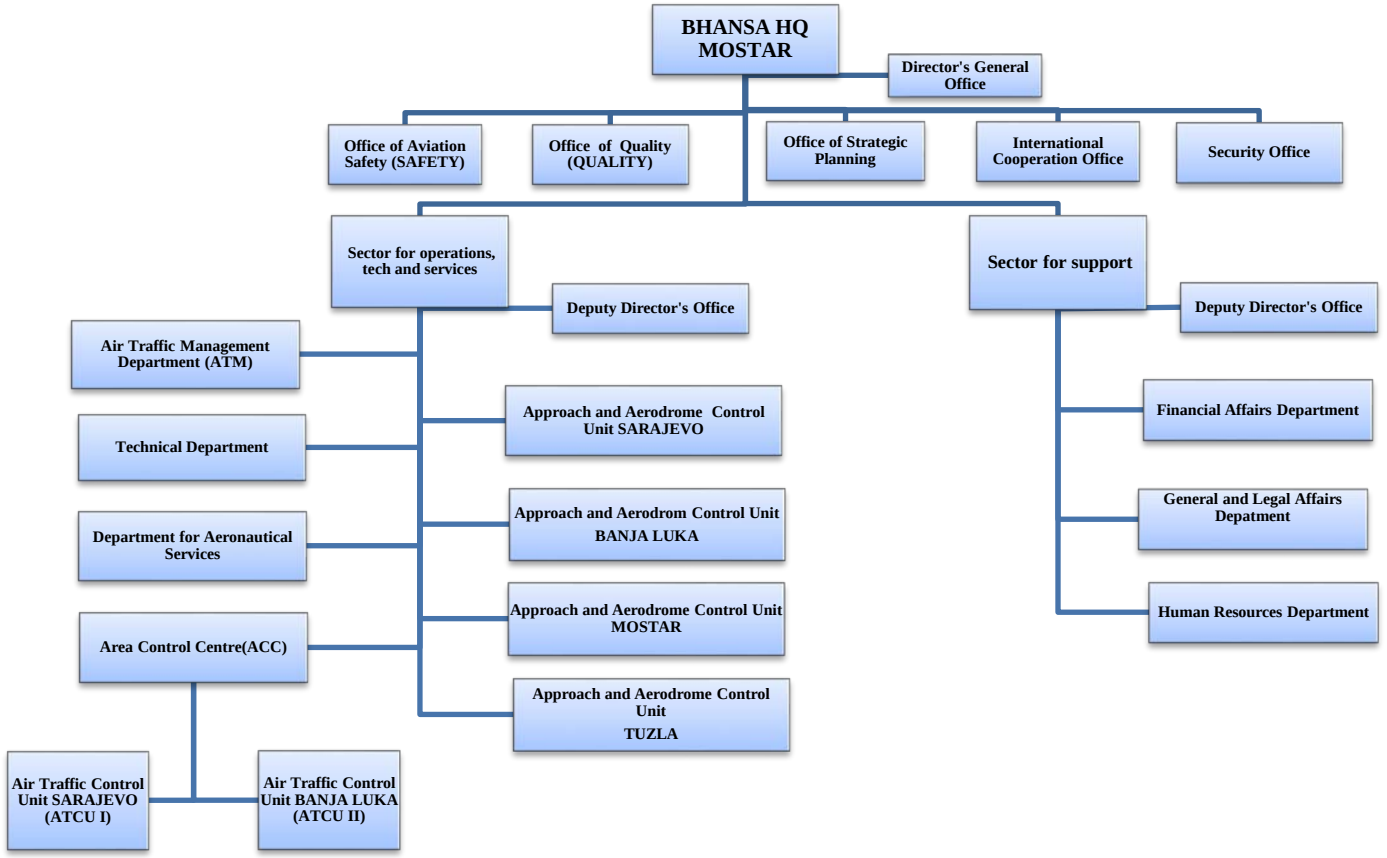
LSSIP Co-ordination

LSSIP Focal Points	Organisation	Name
LSSIP National Focal Point	BHDCA	Mr. Radomir Gavrić
LSSIP Focal Point for NSA/CAA	-	
LSSIP Focal Point for ANSP	-	Mr. Zoran Blažević Mr. Vlado Jurić Mr. Darijo Stojkić Mrs. Sanela Zekić Mr. Slavenko Buha Mr. Ivica Primorac Mrs. Zorica Stanković Mr. Dalibor Ninković Mr. Adnan Hurtić Mr. Aleksandar Škondrić Mr. Mirsad Hadžialić Mr. Davor Rotim Mr. Muhamed Hodžić Mr. Slavoljub Stanišić
LSSIP Focal Point for Airport	Airport Sarajevo	Mr.Nermin Zijadić Mr. Vahidin Zukanović
LSSIP Focal Point for Military	Ministry of Defense of Bosnia and Herzegovina	Mr. Josip Brajković Mr. Vladimir Grujić

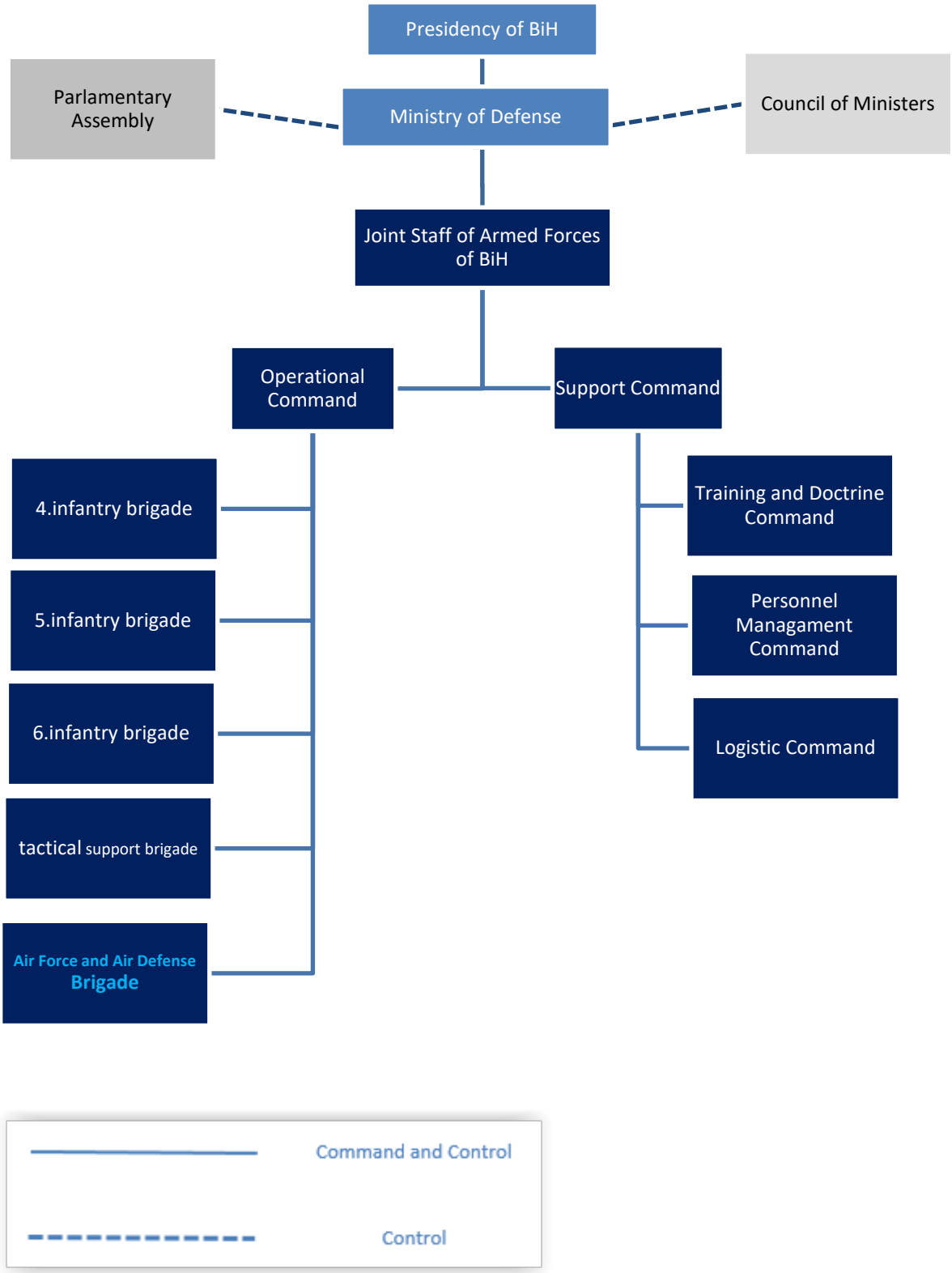
B. National stakeholders organisation charts



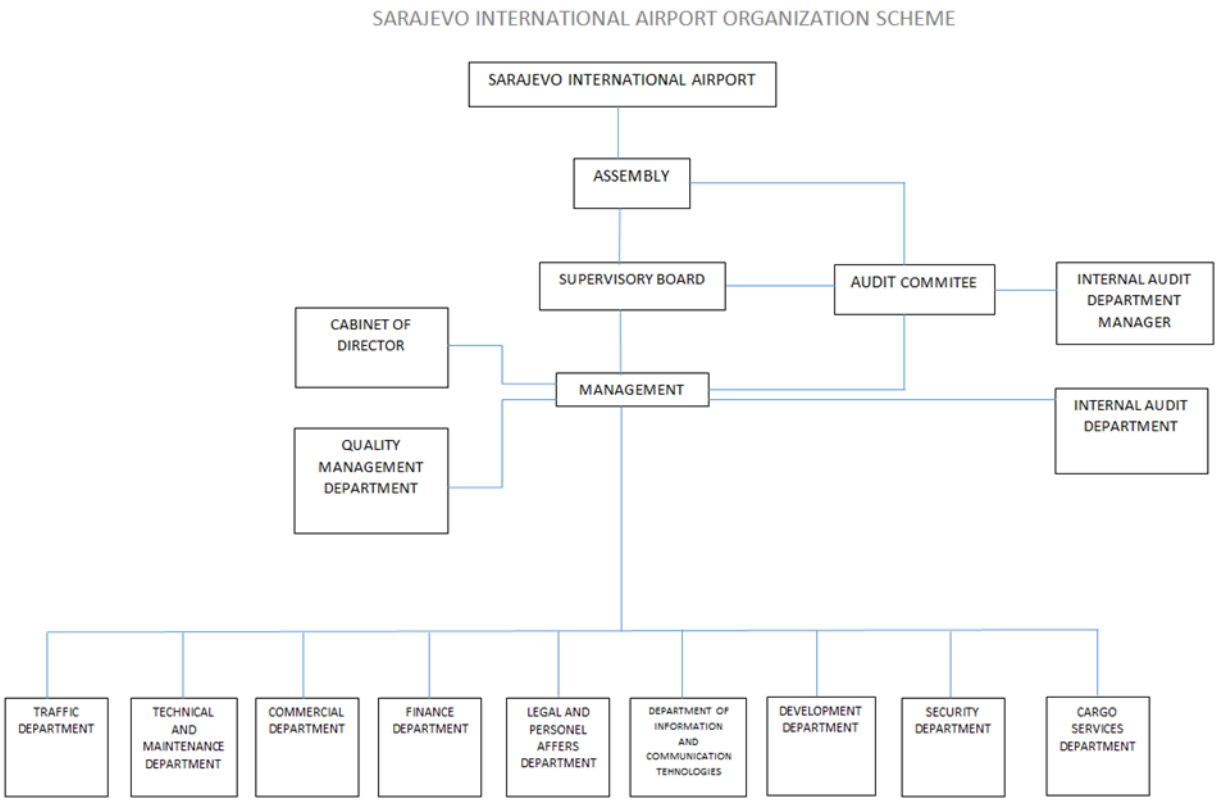
BHANSA Organisation Chart:



Defense organization in BiH



International Airport Sarajevo



C. Implementation Objectives' links with SESAR KF, ASBU blocks and more

The table below (extracted from the MPL3 Progress Plan 2019) shows for each implementation objective, the links with the SESAR Key Features, Major ATM Changes, SESAR 1 Solutions, Deployment Program families, ICAO ASBU, EASA EPAS and AAS TP milestones.

Level 3 Implementation Objectives	SESAR Key Feature	Major ATM change	SESAR Solution	DP family	ICAO ASBU B0, B1, B2	EPAS	AAS TP
AOM13.1 - Harmonise OAT and GAT handling		FRA & A-FUA	-	-	-	-	-
AOM19.1 - ASM tools to support A-FUA		FRA & A-FUA	#31	3.1.1	B1-FRTO B1-NOPS	-	AM-1.8
AOM19.2 - ASM management of real-time airspace data		FRA & A-FUA	#31	3.1.2	B1-FRTO B1-NOPS	-	AM-1.8
AOM19.3 - Full rolling ASM/ATFCM process and ASM information sharing		FRA & A-FUA	#31	3.1.3	B1-FRTO B1-NOPS B2-NOPS	-	AM-1.8
AOM19.4 – Management of Pre-defined Airspace Configurations		FRA & A-FUA	#31	3.1.4	B1-FRTO B1-NOPS	-	-
FCM03 - Collaborative flight planning		ATFCM	-	4.2.3	B0-NOPS	-	AM-1.14
*FCM04.1 – STAM phase 1		ATFCM	-	4.1.1	-	-	-
FCM04.2 - STAM phase 2		ATFCM	#17	4.1.2	-	-	AM-1.11
FCM05 - Interactive rolling NOP		NOP	#20, #21	4.2.2 4.2.4	B1-ACDM B1-NOPS	-	AM-1.12
FCM06 - Traffic Complexity Assessment		ATFCM	#19	4.4.2	B1-NOPS	-	AM-1.13
FCM07 - Calculated Take-off Time (CTOT) to Target Times for ATFCM Purposes		ATFCM	#18	4.3.1 4.3.2	B1-NOPS	-	AM-1.9
FCM09 - Enhanced ATFM Slot swapping		ATFCM	#56	-	B1-NOPS	-	-

Level 3 Implementation Objectives	SESAR Key Feature	Major ATM change	SESAR Solution	DP family	ICAO ASBU B0, B1, B2	EPAS	AAS TP
*AOM21.1 - Direct Routing		Free Route	#32	3.2.1 3.2.3	B0-FRTO B1-FRTO	-	-
AOM21.2 - Free Route Airspace		Free route	#33, #66	3.2.1 3.2.4	B1-FRTO	-	AM-1.6 AM-1.10 AM-5.1
ATC02.8 - Ground based safety nets		ATM Systems	-	3.2.1	B0-SNET B1-SNET	-	-
ATC02.9 – Enhanced STCA for TMAs		ATM Systems	#60	-	B0-SNET B1-SNET	MST.030	-
ATC07.1 - Arrival management tools		Enhanced Arrival Seq	-	1.1.1	B0-RSEQ	-	-
ATC12.1 - MONA, TCT and MTCD		ATM Systems	#27, #104	3.2.1	B1-FRTO	-	AM-1.15 AM-5.1
ATC15.1 – Initial extension of AMAN to En-route		Enhanced Arrival Seq	-	1.1.2	B1-RSEQ	-	-
ATC15.2 - Extension of AMAN to En-route		Enhanced Arrival Seq	#05	1.1.2	B1-RSEQ	-	AM-1.3
ATC17 - Electronic Dialog supporting COTR		Free Route	-	3.2.1	-	-	AM-1.3
ATC18 – Multi Sector Planning En-route – 1P2T		Free Route	#63	-	-	-	AM-4.3 AM-5.1
ATC19 - Enhanced AMAN-DMAN integration		Enhanced Arrival Seq	#54	-	B2-RSEQ	-	-
ATC20- Enhanced STCA with down-linked parameters via Mode S EHS		ATM Systems	#69	-	B1-SNET	-	-
ENV01 – Continuous Descent Operations		PBN	-	-	B0-CDO B1-CDO	-	-
ENV03 – Continuous Climb Operations		PBN	-	-	B0-CCO	-	-
NAV03.1 – RNAV1 in TMA Operations		PBN	#62	-	B0-CDO B0-CCO B1-RSEQ	RMT.0639 RMT.0445	-

Level 3 Implementation Objectives	SESAR Key Feature	Major ATM change	SESAR Solution	DP family	ICAO ASBU B0, B1, B2	EPAS	AAS TP
NAV03.2 – RNP1 in TMA Operations		PBN	#09, #51	1.2.3 1.2.4	B1-RSEQ	RMT.0639 RMT.0445	-
NAV10 - RNP Approach Procedures to instrument RWY		PBN	#103	1.2.1 1.2.2	B0-APTA	RMT.0639 RMT.0445R MT.0643	-
NAV12 – ATS IFR Routes for Rotorcraft Operations		PBN	#113	-	B1-APTA	MST.031	-
AOP04.1 - A-SMGCS Surveillance (former Level 1)		Surface mgt	#70	2.2.1	B0-SURF	-	-
AOP04.2 - A-SMGCS RMCA (former Level 2)		Surface mgt	-	2.2.1	B0-SURF	-	-
AOP05 - Airport CDM		Collaborative Apt	#106	2.1.1 2.1.3	B0-ACDM B0-RSEQ	-	-
AOP10 - Time Based Separation		Enhanced ops in vicinity of rwy	#64	2.3.1	B1-RSEQ B2-WAKE	-	-
AOP11 - Initial Airport Operations Plan		Collaborative Apt	#21	2.1.4	B1-ACDM	-	-
AOP12 - Improve RWY and Airfield safety with CATC detection and CMAC		Surface mgt	#02	2.1.2 2.5.1	B2-SURF	-	-
AOP13 – Automated assistance to Controller for Surface Movement planning and routing		Surface mgt	#22 #53	2.4.1	B1-ACDM B1-RSEQ B2-SURF	-	-
AOP14 – Remote Tower Services		Remote Tower	#12, #71, #52, #13	-	B1-RATS	RMT.0624	-
AOP15 - Enhanced traffic situational awareness and airport SNET for the vehicle drivers		Surface mgt	#04	-	B2-SURF	-	-
AOP16 - Guidance assistance through airfield ground lighting		Surface mgt	#47	-	B1-RSEQ B2-DURF	-	-
AOP17 - Provision/integration of departure planning information to NMOC		Collaborative Apt	#61	-	B1-ACDM B1-NOPS	-	-

Level 3 Implementation Objectives	SESAR Key Feature	Major ATM change	SESAR Solution	DP family	ICAO ASBU B0, B1, B2	EPAS	AAS TP
AOP18 - Runway Status Lights (RWSL)		Surface mgt	#01	-	B2-SURF	-	-
ENV02 – Airport Collaborative Environmental Management		Collaborative Apt	-	-	-	-	-
NAV11 - Implement precision approach using GBAS CAT II/III based on GPS L1		Enhanced ops in vicinity of rwy	#55	-	B1-APTA	-	-
SAF11 - Improve runway safety by preventing runway excursions		Surface mgt	-	-	-	MST.007 RMT.0570 RMT.0703	-
COM10 - Migration from AFTN to AMHS		CNS rat.	-	-	-	-	-
COM11.1 - Voice over Internet Protocol (VoIP) in En-Route		CNS rat.	-	3.1.4	-	-	AM-1.3
COM11.2 - Voice over Internet Protocol (VoIP) in Airport/Terminal		CNS rat.	-	-	-	-	-
COM12 - NewPENS		Pre-SWIM & SWIM	-	5.1.2 5.2.1	B1-SWIM	-	-
FCM08 – Extended Flight Plan		Pre-SWIM & SWIM	#37	4.2.3	B1-FICE	-	AM-1.4
INF07 - Electronic Terrain and Obstacle Data (e-TOD)		Pre-SWIM & SWIM	-	1.2.2	-	RMT.0703 RMT.0704 RMT.0722	-
INF08.1 - Information Exchanges using the SWIM Yellow TI Profile		Pre-SWIM & SWIM	#35, #46	5.1.3, 5.1.4, 5.2.1, 5.2.2, 5.2.3, 5.3.1, 5.4.1, 5.5.1, 5.6.1	B1-DATM B1-SWIM	-	AM-1.5

Level 3 Implementation Objectives	SESAR Key Feature	Major ATM change	SESAR Solution	DP family	ICAO ASBU B0, B1, B2	EPAS	AAS TP
INF08.2 - Information Exchanges using the SWIM Blue TI Profile		Pre-SWIM & SWIM	#28, #46	5.1.3, 5.1.4, 5.2.1, 5.2.2, 5.2.3, 5.6.2	B1-DATM B1-SWIM	-	AM-9.1
INF09 - Digital Integrated Briefing		Pre-SWIM & SWIM	#34	-	B1-DATM B1-SWIM	-	-
ITY-ACID - Aircraft identification		CNS rat.	-	-	-	-	-
ITY-ADQ - Ensure quality of aeronautical data and aeronautical information		Pre-SWIM & SWIM	-	1.2.2	B0-DATM	RMT.0722 RMT.0477	-
ITY-AGDL - Initial ATC air-ground data link services		Data link	-	6.1.1 6.1.3 6.1.4	B0-TBO	RMT.0524	AM-1.1
ITY-AGVCS2 – 8.33 kHz Air-Ground Voice Channel Spacing below FL195		CNS rat.	-	-	-	-	-
ITY-FMTP - Apply a common flight message transfer protocol (FMTP)		Pre-SWIM & SWIM	-	-	B0-FICE B1-FICE	-	AM-1.3
ITY-SPI - Surveillance performance and interoperability		CNS rat.	-	-	B0-ASUR	RMT.0679 RMT.0519	-

* *AOM21.1 was achieved in 2017 and FCM04.1 was achieved in 2018, therefore they were removed from the Implementation Plan 2018/2019. They are kept in this table for traceability purposes.*

Legend:

Objective's link to SESAR Key Feature:			
	Optimised ATM Network Services		High Performing Airport Operations
	Advanced Air Traffic Services		Enabling Aviation Infrastructure

D. Military Organisations Infrastructure

This Annex is not produced in 2019. It will be updated every second year, therefore it will be produced as part of the LSSIP 2020 document.

In case information is sought on military infrastructure, previous LSSIP may be made available upon request to the respective Focal Point and/or Contact Person.

E. Glossary of abbreviations

This Annex mainly shows the abbreviations that are specific to the LSSIP Document for Bosnia and Herzegovina.

Other general abbreviations are in the Acronyms and Abbreviations document in:

https://www.eurocontrol.int/airial/

Term	Description
BH	Bosnia and Herzegovina
BHDCA	Bosnia and Herzegovina Directorate of Civil Aviation
BHANSA	Bosnia and Herzegovina Agency for Air Navigation Services
FAB-CE	Central European Functional Airspace Block
CCL	Croatia Control Ltd.
DPS	Data Processing Systems
ISIS Programme	Implementation of Single European Sky In South East Europe
MoD BH	Ministry of Defence of BH
SEP team	Team for separation of regulatory and the service provision functions
SES	Single European Sky
SEE FABA	South East Europe Functional Airspace Block Approach
SMATSA	Serbia and Montenegro Air Traffic Service Agency