



SESAR Solution Regulatory Overview

Calculated take-off time (CTOT) and target time of arrival (TTA)

Document information

Document Name	Calculated take-off time (CTOT) and target time of arrival (TTA)
Edition	01.00.00

Abstract

This document contains an overview of the SESAR Solution “ Calculated take-off time (CTOT) and target time of arrival (TTA)” documented recommendations from regulatory, standardisation, oversight and certification perspectives resulting from the cooperation between the SESAR Joint Undertaking and the EASA and National Authorities.

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles
www.sesarju.eu

Authoring & Approval

Prepared By - <i>Authors of the document.</i>		
Name & Company	Position & Title	Date
██████████	████████████████████	03/11/2016

Document History

Edition	Date	Status	Author	Justification
00.00.01	21.10.2016	Draft	██████████	Incorporation of initial results
01.00.00	03.11.2016	Final	██████████	Finalised document

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles
www.sesarju.eu

Table of Contents

1	INTRODUCTION.....	4
2	GENERAL RECOMMENDATIONS.....	5
3	SPECIFIC RECOMMENDATIONS	6
3.1	ON THE REGULATORY FRAMEWORK	6
3.2	ON THE STANDARDISATION FRAMEWORK.....	6
3.3	ON THE REGULATORY OVERSIGHT AND CERTIFICATION ACTIVITIES	6

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles
www.sesarju.eu

1 Introduction

The purpose of this document is to provide an overview of the SESAR Solution “Calculated take-off time (CTOT) and target time of arrival (TTA)” documented recommendations from regulatory, standardisation, oversight and certification perspectives resulting from the cooperation between the SESAR Joint Undertaking and the EASA and National Authorities.

The document presents the recommendations issued by the National Authorities and EASA, for an acceptable deployment of the concepts contained in the SESAR Solution. These recommendations must be taken into consideration by the entities in charge of deployment of the correspondent SESAR Solution.

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles
www.sesarju.eu

2 General recommendations

In general terms, it must be underlined that:

- 1) When deploying a SESAR Solution, the compliance with all applicable regulatory requirements must be ensured by the different concerned entities;
- 2) In particular, it must be ensured that the appropriate safety argument for the concerned change to the ATM functional system is performed in accordance with Commission Implementing Regulation (EU) 2016/1377 of 4 August 2016 laying down common requirements for service providers and the oversight in air traffic management/air navigation services and other air traffic management network functions, repealing Regulation (EC) No 482/2008, Implementing Regulations (EU) No 1034/2011 and (EU) No 1035/2011 and amending Regulation (EU) No 677/2011 confirming validity of assumptions of the SESAR solution, addressing local specific risks and mitigation providing evidence that residual risks are acceptable.
- 3) The present SESAR Solution does not constitute in itself an acceptable Means of Compliance with the previously mentioned regulatory requirements. Means of Compliance are subject to their acceptance by the Authorities involved in each concrete local implementation.
- 4) A verification of the existing standardisation and regulatory frameworks has to be done before the date of local deployment to identify possible major changes to the ones applicable for the SESAR Solution.

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles
www.sesarju.eu

3 Specific recommendations

3.1 On the Regulatory Framework

There is no specific topic on the regulatory framework field to be specially considered in deployment, beyond the currently existing applicable regulations.

3.2 On the Standardisation Framework

There is no specific topic on the standardisation framework field to be specially considered in deployment, beyond the currently existing applicable standardisation.

3.3 On the Regulatory Oversight and Certification Activities

When proceeding with the local implementation of this solution, and following Commission Implementing Regulation (EU) 2016/1377, changes in the ATM functional system derived from the deployment of this solution are subject to the elaboration of a safety argument considering local specific risks and mitigation measures to those risks.

ATM/ANS.OR.C.005 Safety support assessment and assurance of changes to the functional system

- (a) For any change notified in accordance with ATM/ANS.OR.A.045(a)(1), the service provider other than the air traffic services provider shall:
- (1) ensure that a safety support assessment is carried out covering the scope of the change which is:
 - (i) the equipment, procedural and human elements being changed;
 - (ii) interfaces and interactions between the elements being changed and the remainder of the functional system;
 - (iii) interfaces and interactions between the elements being changed and the context in which it is intended to operate;
 - (iv) the life cycle of the change from definition to operations including transition into service; and
 - (v) planned degraded modes; and
 - (2) provide assurance, with sufficient confidence, via a complete, documented and

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles
www.sesarju.eu

valid argument that the service will behave and will continue to behave only as specified in the specified context.

(b) A service provider other than an air traffic services provider shall ensure that the safety support assessment referred to in point (a) comprises:

(1) verification that:

(i) the assessment corresponds to the scope of the change as defined in point (a)(1);

(ii) the service behaves only as specified in the specified context; and

(iii) the way the service behaves complies with and does not contradict any applicable requirements of this Regulation placed on the services provided by the changed functional system; and

(2) specification of the monitoring criteria necessary to demonstrate that the service delivered by the changed functional system will continue to behave only as specified in the specified context.

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles
www.sesarju.eu

- END OF DOCUMENT -

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles
www.sesarju.eu