

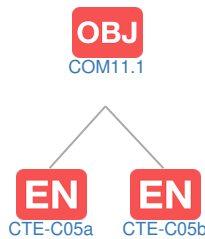
NOTE: COM11.1 is a successor of the former objective COM11. Its applicability date is related to the DP Family 3.1.4 in the context of supporting FRA, however the objective COM11.1 (and old COM11) goes beyond DP Family 3.1.4 (FRA) and plans harmonised VoIP implementation in the whole En-Route environment (without FL310 limitation). This is to be able to collect yearly progress reports from all implementations (DP related and None-DP related).

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each military authority to review this Objective IN ITS ENTIRETY and address each of the SLoAs that the military authority considers RELEVANT for itself. This has to be done on top and above of the review of "MIL" SLoAs which identify actions EXCLUSIVE to military authorities.

<b>Edition</b>	2019
<b>Stakeholders</b>	Air Navigation Service Provider
<b>Type</b>	SESAR
<b>Scope</b>	ECAC+
<b>Status</b>	Active

## Context

### Related Elements



## Applicability Area(s) and Timescales

**Applicability Area:** All ECAC+ States

Timescales	From	By	Applicable to
Initial operational capability	01-01-2013	-	Applicability Area
Full operational capability	-	31-12-2021	Applicability Area

## Links to ATM Master Plan Level 2

### Enablers

Code	Title	IOC	Related Elements
CTE-C05a	VoIP for ground telephony	-	 
CTE-C05b	Digital Voice / VoIP for ground segment of Air-Ground voice	-	 

## SOL Links to SESAR Solutions

Code	Title	Program	Related Elements
No record found			

## PCP Links to PCP ATM Sub-Functionalities

Code	Title	Related Elements
No record found		

ICAO ICAO Block Modules: No associated data

## References

### Applicable legislation

None

### Applicable ICAO Annexes and other references

Covers ICAO Global Plan Initiative GP-22

### Deployment Programme 2019

-

### Operating Environments

En-Route

Network

## Expected Performance Benefits

<b>Safety</b>	Maintained or improved by providing enhanced signalisation functions. Improved by providing a more resilient infrastructure.
<b>Capacity</b>	Maintained or improved by providing enhanced signalisation functions.
<b>Operational efficiency</b>	-
<b>Cost efficiency</b>	Reduced costs by enabling flexible and dynamic use of ANSP resources, leading to long term savings.
<b>Environment</b>	-
<b>Security</b>	-

## Stakeholder Lines of Action

Code	Title	From	By	Related Enablers
ASP01	Develop safety assessment for the changes	01-01-2012	31-12-2021	
ASP03	Upgrade and put into service Voice Communication Systems to support VoIP inter-centre telephony	01-01-2013	31-12-2021	EN
ASP04	Upgrade and put into service Voice Communication Systems to support VoIP links to the ground radio stations	01-01-2013	31-12-2021	EN

## Supporting Material

Title	Related SLoAs
EC - COMMISSION IMPLEMENTING REGULATION (EU) 2017/373 - (OJ L 62, 8.03.2017, p. 1) - COMMISSION IMPLEMENTING REGULATION (EU) 2017/373 of 1 March 2017 laying down common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight, repealing Regulation (EC) No 482/2008, Implementing Regulations (EU) No 1034/2011, (EU) No 1035/2011 and (EU) 2016/1377 and amending Regulation (EU) No 677/2011 03/2017 <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R0373&amp;from=EN">https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R0373&amp;from=EN</a>	ASP01
EUROCAE - ED-136 - Voice over Internet Protocol (VoIP) Air Traffic Management (ATM) System Operational and Technical Requirements 02/2009 <a href="https://eshop.eurocae.net/eurocae-documents-and-reports">https://eshop.eurocae.net/eurocae-documents-and-reports</a>	ASP03, ASP04
EUROCAE - ED-137/1B - Interoperability Standards for VoIP ATM Components - Volume 1 Radio <a href="https://eshop.eurocae.net/eurocae-documents-and-reports">https://eshop.eurocae.net/eurocae-documents-and-reports</a>	ASP04
EUROCAE - ED-137/1C - Interoperability Standards for VoIP ATM Components - Volume 1: Radio <a href="https://eshop.eurocae.net/eurocae-documents-and-reports">https://eshop.eurocae.net/eurocae-documents-and-reports</a>	ASP04
EUROCAE - ED-137/2B - Interoperability Standards for VoIP ATM Components - Volume 2 Telephone 01/2012 <a href="https://eshop.eurocae.net/eurocae-documents-and-reports">https://eshop.eurocae.net/eurocae-documents-and-reports</a>	ASP03
EUROCAE - ED-137/3B - Interoperability Standards for VoIP ATM Components - Volume 3 European Legacy Telephone Interworking 01/2012 <a href="https://eshop.eurocae.net/eurocae-documents-and-reports">https://eshop.eurocae.net/eurocae-documents-and-reports</a>	ASP03
EUROCAE - ED-137/4B - Interoperability Standards for VoIP ATM Components - Volume 4 Recording 01/2012 <a href="https://eshop.eurocae.net/eurocae-documents-and-reports">https://eshop.eurocae.net/eurocae-documents-and-reports</a>	ASP03, ASP04
EUROCAE - ED-137/5B - Interoperability Standards for VoIP ATM Components - Volume 5 Supervision 01/2012 <a href="https://eshop.eurocae.net/eurocae-documents-and-reports">https://eshop.eurocae.net/eurocae-documents-and-reports</a>	ASP03, ASP04
EUROCAE - ED-138 - Network Requirements and Performances for Voice over Internet Protocol (VoIP) Air Traffic Management (ATM) Systems - Part 2 Network Design Guideline <a href="http://boutique.eurocae.net/catalog/index.php">http://boutique.eurocae.net/catalog/index.php</a>	ASP03, ASP04
EUROCONTROL - EAM 4 - ESARR 4 - Risk Assessment and Mitigation in ATM - Edition 1.0 / 04/2001 <a href="https://www.eurocontrol.int/publication/esarr-4-risk-assessment-and-mitigation-atm">https://www.eurocontrol.int/publication/esarr-4-risk-assessment-and-mitigation-atm</a>	ASP01
EUROCONTROL - Guidelines on Conformity Assessment for the Interoperability Regulation of the Single European Sky - Edition 3.0 / 02/2012 <a href="https://www.eurocontrol.int/publication/eurocontrol-guidelines-conformity-assessment-interoperability-regulation-single">https://www.eurocontrol.int/publication/eurocontrol-guidelines-conformity-assessment-interoperability-regulation-single</a>	ASP03, ASP04
EUROCONTROL - SIP v ATS-QSIG Gateway Interworking Test Specification - Edition 2 / 12/2013 -	ASP03, ASP04
EUROCONTROL - SIP v ATS-R2 Gateway Interworking Test Specification - Edition 2 / 12/2013 -	ASP03, ASP04
EUROCONTROL - VOTER 3 0 3 baseline specification - Vol 1 - GRS Radio ED137B compliance - ed 2.9 -	ASP04
EUROCONTROL - VOTER 3 0 3 baseline specification - Vol 2 - VCS Radio ED137B compliance - ed 2.9 -	ASP04
EUROCONTROL - VOTER 3 0 3 baseline specification - Vol 3 - VCS Telephone ED137B compliance - ed 2.9 / 12/2014 -	ASP03, ASP04
EUROCONTROL - VOTER 3 0 3 baseline specification - Vol 4 - Recorder ED137B compliance - ed 2.9 / 12/2014 -	ASP03, ASP04
EUROCONTROL - VOTER 3 0 3 baseline specification - Vol 5 - Interoperability - ed 2.9 / 12/2014 -	ASP03, ASP04
EUROCONTROL - VOTER 3 0 3 baseline specification - Vol 6 - Performance - ed 2.9 / 12/2014 -	ASP03, ASP04

Title	Related SLoAs
EUROCONTROL - VOTER 4.0.x baseline specification - VOL 1 - GRS Radio ED-137/1C - ed 3.3 -	ASP04
EUROCONTROL - VOTER Test Tool - version 3.0.5 - 2016 -	ASP03, ASP04
EUROCONTROL - VoIP in ATM Cross-Reference Matrix - Edition 2.0 / 12/2013 <a href="https://ost.eurocontrol.int/sites/VOTE/Shared Documents/Reference Documents">https://ost.eurocontrol.int/sites/VOTE/Shared Documents/Reference Documents</a>	ASP03, ASP04
ICAO - Doc 9896 - Manual for the ATN using IPS Standards and Protocols - Edition 2.0 / 2015 <a href="https://store1.icao.int/">https://store1.icao.int/</a>	ASP03, ASP04

## Consultation & Approval

<b>Working Arrangement in charge</b>	CNS / COM SG
<b>Outline description approved in</b>	02/2009
<b>Latest objective review at expert level</b>	12/2018
<b>Commitment Decision Body</b>	Provisional Council (PC)
<b>Objective approved/endorsed in</b>	08/2011
<b>Latest change to objective approved/endorsed in</b>	06/2019