




Deployment Scenario Title	Aeronautical mobile airport communication system (AeroMACS)
Deployment Scenario Description	-
Essential Operational Change	CNS Infrastructure and Services
Maturity	Additional SESAR Solutions in deployment




Applicable Operating Environment			
Airport	Terminal Airspace	En-Route	Network












Timeline																					
2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035

Performance Contribution of the DS				
Capacity	Safety	Environment	Cost-efficiency	Operational efficiency

Stakeholders affected (at least one enabler to be deployed)						
ANSP		AO		AU		Network Manager
Civil	Military	Civil	Military	Civil	Military	
TWR, ENR, CNS	TWR, CNS	APT Operator	APT Operator	Scheduled, BA Fixed, GA, FOC		

SESAR Solutions			
Solution Code	Solution Title	Solution Description	Related Elements
#102	Aeronautical mobile airport communication system (AeroMACS)	ATM communications capacity is reaching saturation in Europe due to increasing air traffic...	  

Operational Improvement Steps			
OI Step Code	OI Step Title	OI Step Description	Related Elements
CNS-0001-B	Rationalisation of COM systems/infrastructure for SESAR2020 Wave 1	Implement new COM functionalities and/or technologies for CNS systems supporting cost efficiency,...	  

Enablers						
Required/Optional	New/Inherited	Develop/Use	Enabler Code	Enabler Title	Enabler Description	Related Elements
			CTE-C01	A/G Voice radio	Existing and New A/G Voice Infrastructure	   
			CTE-C01a	Existing Voice radio (VHF 25/8.33KHz)	'VHF 8.33 kHz is mandated in all continental airspace to support increases in traffic. Note: This...	    

Enablers						
Required/Optional	New/Inherited	Develop/Use	Enabler Code	Enabler Title	Enabler Description	Related Elements
🔒			CTE-C01b	New Digital A/G Voice	'The migration from analogue to digital Air-ground voice is carried out provided that an...	STK OI DS
🔒			CTE-C01c	SATCOM Voice for ATC (oceanic and Polar)	Use of current SATCOM systems (e.g. INMARSAT3, Iridium, SBB, etc.) to support ATC voice...	OI DS ⚙️
🔒			CTE-C02	A/G Datalink radio	A/G DL Infrastructure covering existing (ACARS and VDL2) and future (AEROMACS, LDACS, Future...	STK OI DS ⚙️
🔒			CTE-C02a	A/G datalink over ACARS (POA/AOA)	A-G datalink using POA and AOA (ACARS over AVLIC) to support AOC and basic ATC data exchange (DCL,...	STK OI DS ⚙️
🔒			CTE-C02b	A/G Datalink over ATN/OSI - Single frequency	A/G datalink using ATN/OSI over VDL2 to support continental ATC services (SES IR) - ATN/OSI B1,...	STK OI EN DS ⚙️
🔒			CTE-C02c	A/G Datalink over ATN/OSI - Multi frequency	Enhanced A/G datalink using ATN/OSI over VDL2 to support continental ATC services - ATN/OSI B1...	STK OI EN DS PCP ⚙️
🔒			CTE-C02d	New Airport Datalink technology (AEROMACS)	New wireless technology for the Airport Datalink AEROMACS over ATN/OSI and ATN/IPS, based on IEEE...	STK OI EN DS ⚙️
🔒			CTE-C02d0	New Airport Datalink technology (AEROMACS)	New wireless technology for the Airport Datalink AEROMACS, based on IEEE 802.16 WiMax, as a new...	STK OI DS
🔒			CTE-C02e	New A/G datalink using ATN/IPS over L-band	A new terrestrial A-G datalink (LDACS) to augment the VDL2 supported A-G datalink services based...	STK OI EN DS ⚙️
🔒			CTE-C02f	Future Satcom for ATM: SATCOM Class B in Multilink	A new satellite A/G datalink to provide service redundancy to the existing terrestrial datalink...	STK OI EN DS ⚙️
🔒			CTE-C02h	Future Satcom for ATM - Long term Satcom/IRIS (class A Satcom)	A new satellite A-G datalink to provide service redundancy to the new terrestrial datalink.	STK OI DS ⚙️
🔒			CTE-C03	Commercial Telecom Infrastructure (SATCOM, Gatelink)	Transmission of data (DL) using commercial means on the airport surface (i.e. gatelink) as well...	OI DS ⚙️
🔒			CTE-C03a	Commercial wireless airport surface communication (Gatelink)	Commercial wireless technology, based on IEEE 802.11 and standardized for aviation use, deployed...	OI DS ⚙️
🔒			CTE-C03b	Broadband Satcom Datalink (i.e. Global Express)	A satellite A/G datalink based on existing Satellite systems, e.g. Global Xpress	STK OI DS ⚙️
🔒			CTE-C03c	Commercial wireless technologies at the Airport surface (not for safety-critical services)	Commercial wireless technologies, such as GPRS, EGDE, 4G, etc. are available for use at the...	STK OI DS ⚙️

Enablers						
Required/Optional	New/Inherited	Develop/Use	Enabler Code	Enabler Title	Enabler Description	Related Elements
🔒			CTE-C03d	Commercial mobile/cellular telecommunications to support non-safety services for General Aviation	Support for general aviation (GA) for non safety services: Use of commercial mobile...	STK OI DS
🔒			CTE-C04	Future Communication Infrastructure - ATN/IPS and Multilink	Evolution of the Ground part of A/G infrastructure to support multi-link (IP Router)	STK OI EN DS ⚙️
🔒			CTE-C05	Ground ATS Voice	Ground voice ATS communications using VoIP	OI DS ⚙️
🔒			CTE-C05a	VoIP for ground telephony	Voice over IP (VoIP), based on ED137B VOL2:TELEPHONY, is deployed for ATM ground telephony...	STK OI EN OBJ DS PCP ⚙️
🔒			CTE-C05b	Digital Voice / VoIP for ground segment of Air-Ground voice	Voice over IP (VoIP), based on ED137B VOL1:RADIO, is deployed for the Ground-Ground segment of...	STK OI EN OBJ DS PCP ⚙️
🔒			CTE-C06	Ground ATM Data communication Network	An IP-based secured network communication service for the connected ANSPs, NM systems (incl. EAD)...	OI OBJ DS ⚙️
🔒			CTE-C06a	PENS - Phase 1	PENS provides a common IP-based secured network service for the connected ANSPs, NM systems...	STK OI DS ⚙️
🔒			CTE-C06b	PENS - Phase 2	PENS phase 1 and in addition connectivity to other ATM Users and new datalink systems (SATCOM,...	STK OI OBJ DS ⚙️
🔒			CTE-C06c	AMHS	Migration to AMHS (ATS Message Handling System) from AFTN is carried out to improve regional,...	STK OI OBJ DS ⚙️
🔒			CTE-C06d	Gateway for CIV/MIL Interoperability	Information exchange gateways/interfaces supporting military aircraft equipped to exchange ATN/B1 ...	STK OI DS ⚙️
🔒			CTE-CGOV01	Data communications Service Provision for ATS and AOC services	A/G Communications Service Provision under contractual agreements with ANSPs/AOs	OI DS
🔒			CTE-CGOV02	Data and voice Communications Service Provision for ATS and AOC services	A/G Communications Service Provision under contractual agreements with CSPs	OI DS
🔒			CTE-CGOV03	Telco service provider for IP data network supporting ATM services	G/G Communications Service Provision under contractual agreements with ANSPs/AOs as required	OI DS