

APPENDIX E1  
IDENTIFICATION AND DEVELOPMENT OF CNS - COMMUNICATIONS PROJECTS

Operational Requirements	CNS Services	Identified projects components	Identified Tasks	To be completed	New Task	ASBU PIA	ASBU Module
G/G Coordination	AFS	Ground/Ground coordination communication	Implementation of ATS/DS	x		PIA2-Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration.  PIA3-Increased effectiveness of ground based safety nets.  PIA3- Air Traffic Situational Awareness(ATSA)	B0-FICE  B0-SNET  B0-ASEP
			Implementation of VoIP		x	PIA2-Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration.  PIA3-Increased effectiveness of ground based safety nets.  PIA3- Air Traffic Situational Awareness(ATSA)	B0-FICE  B0-SNET  B0-ASEP
			Implementation of AIDC		x	PIA2 Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration  PIA2 Service	BO-FICE  BO-DAIM

						<p>Improvement through Digital Aeronautical Information Management</p> <p>PIA 2 Meteorological information supporting enhanced operational efficiency and safety</p> <p>PIA3. Improved Operations through Enhanced En-Route Trajectories</p> <p>PIA3 Improved Flow Performance through Planning based on a Network-Wide view</p> <p>PIA3. Air Traffic Situational Awareness(ATSA)</p> <p>PIA3 Increased Effectiveness of Ground-Based Safety Nets</p>	<p>BO-AMET</p> <p>B0-FRTO</p> <p>B0-NOPS</p> <p>B0- ASEP</p> <p>B0-SNET</p>	
Aeronautical Information and MET data flow	AFS	Ground digital data dissemination	Implementation of AFTN	x				
			AMHS (Domestic)	x			PIA1 Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)	B0-SURF
			AMHS (Regional-AFI)		X		PIA1 Improved Airport Operations through Airport-CDM	B0-ACDM
			AMHS (Inter Regional)		X		PIA2 Increased	BO-FICE

					<p>Interoperability, Efficiency and Capacity through Ground-Ground Integration</p> <p>PIA2 Service Improvement through Digital Aeronautical Information Management</p> <p>PIA2 Meteorological information supporting enhanced operational efficiency and safety</p> <p>PIA3 Improved Operations through Enhanced En-Route Trajectories</p> <p>PIA3 Improved Flow Performance through Planning based on a Network-Wide view</p> <p>PIA3 Air Traffic Situational Awareness(ATSA)</p> <p>PIA3- Increased Effectiveness of Ground-Based Safety Nets</p>	<p>BO-DAIM</p> <p>BO-AMET</p> <p>B0-FRTO</p> <p>B0-NOPS</p> <p>B0- ASEP</p> <p>B0-SNET</p>
			<b>Deployment of AFI ATN backbone Infrastructure</b>	<b>x</b>	<p>PIA1 Improved Airport Operations through Airport-CDM</p> <p>PIA2 Increased</p>	<p>B0-ACDM</p> <p>BO-FICE</p>

						<p>Interoperability, Efficiency and Capacity through Ground-Ground Integration</p> <p>PIA2 Service Improvement through Digital Aeronautical Information Management</p> <p>PIA2 Meteorological information supporting enhanced operational efficiency and safety</p> <p>PIA3 Improved Operations through Enhanced En-Route Trajectories</p> <p>PIA3 Improved Flow Performance through Planning based on a Network-Wide view</p> <p>PIA3 Air Traffic Situational Awareness(ATSA)</p> <p>Increased Effectiveness of Ground-Based Safety Nets</p>	<p>BO-DAIM</p> <p>BO-AMET</p> <p>B0-FRTO</p> <p>B0-NOPS</p> <p>B0- ASEP</p> <p>B0-CDO</p>
			<p><b>Reduction of missing operational messages (Flight plans, NOTAM, Met messages etc)</b></p>	<p>x</p>		<p>PIA2 Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration</p>	<p>B0-FICE</p>

						<p>PIA2 Service Improvement through Digital Aeronautical Information Management</p> <p>PIA2 Meteorological information supporting enhanced operational efficiency and safety</p> <p>PIA3 Improved Flow Performance through Planning based on a Network-Wide view</p> <p>PIA3 Air Traffic Situational Awareness(ATSA)</p> <p>PIA3 Increased Effectiveness of Ground-Based Safety Nets</p>	<p>B0-DAIM</p> <p>B0-AMET</p> <p>0-NOPS</p> <p>B0- ASEP</p> <p>B0-SNET</p>
			<p><b>Upgrade of current networks to handle bigger bandwidth</b></p>	<p><b>x</b></p>		<p>PIA2 Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration</p> <p>PIA2 Service Improvement through Digital Aeronautical Information Management</p> <p>PIA2 Meteorological information supporting</p>	<p>B0-FICE</p> <p>B0-DAIM</p> <p>B0-AMET</p>

						<p>enhanced operational efficiency and safety</p> <p>PIA3 Improved Flow Performance through Planning based on a Network-Wide view</p> <p>PIA3 Air Traffic Situational Awareness(ATSA)</p> <p>PIA3 Increased Effectiveness of Ground-Based Safety Nets</p>	<p>B0-NOPS</p> <p>B0- ASEP</p> <p>B0-SNET</p>
<b>Air/Ground Communication</b>	<b>AMS</b>	<b>Improvement of Air/Ground voice communication</b>	<b>Implementation of VHF &amp; HF(Voice) including coverage</b>	<b>x</b>		<p>PIA1 Improve Traffic flow through Runway Sequencing (AMAN/DMAN)</p> <p>*PIA1 Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)</p> <p>PIA2 Meteorological information supporting enhanced operational efficiency and safety</p> <p>PIA2 Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration</p>	<p>B0-RSEQ</p> <p>B0-SURF</p> <p>B0-AMET</p> <p>B0-FICE</p>

						PIA3 Air Traffic Situational Awareness(ATSA)	B0- ASEP
	<b>Implementation of Air/Ground digital communication</b>	<b>Implementation of CPDLC (data)</b>	<b>x</b>			PIA3 Improved Operations through Enhanced En-Route Trajectories	B0-FRTO
PIA2 Meteorological information supporting enhanced operational efficiency and safety						B0-AMET	
						PIA4 Improved Safety and Efficiency through the initial application of Data Link En-Route.	B0-TBO
						PIA3 Air Traffic Situational Awareness(ATSA)	B0- ASEP
		<b>Implementation of VDL (data)</b>				PIA2 Service Improvement through Digital Aeronautical Information Management	B0-DAIM
						PIA1 Improve Traffic flow through Runway Sequencing (AMAN/DMAN)	B0-RSEQ
						PIA1 Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)	B0-SURF

						PIA2 Meteorological information supporting enhanced operational efficiency and safety	B0-AMET
						PIA3 Air Traffic Situational Awareness(ATSA	B0- ASEP
			<b>Implementation of HF DL(data)</b>		<b>x</b>	PIA 1 Improve Traffic flow through runway Sequencing (AMAN/DMAN)	B0-RSEQ
				PIA1 Increased Runway Throughput through optimized Wake Turbulence Separation.		B0-WAKE	
				PIA1 Improved Airport Operations through Airport –CDM		B0-ACDM	
				PIA2 Service improvement through Digital Aeronautical Information Management		B0-DIAM	
				PIA 2 Meteorological information supporting enhanced operational efficiency and safety.		B0- MET	
				PIA2 Increased interoperability efficiency and capacity through ground-ground integration.		BO-FICE	

						<p>PIA 3 Improved operations through Enhanced En-Route Trajectories.</p> <p>PIA3 Improved flow performance through planning based on Network-wide view.</p> <p>PIA3 Air Traffic Situational awareness (ATSA)</p> <p>PIA3 Improved access to optimum Flight levels through Climb/Descent Procedures using ADS-B.</p> <p>PIA3 Increased effectiveness of ground – based safety Nets.</p> <p>PIA4.Improved flexibility and Efficiency in Decent provides (CDO).</p> <p>PIA4Improved safety and efficiency through the initial application of Data link En –Route</p> <p>PIA4 Improved Flexibility and Efficiency Departure profiles- Continuous Climb Operations (CCO</p>	<p>BO-FRTO</p> <p>B0- NOPS</p> <p>B0-ASEP</p> <p>B0-OPF</p> <p>B0-102 SNET</p> <p>B0-CDO</p> <p>B0-TBO</p> <p>B0-05 CCO</p>
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			<b>Implementation of SSR Mode S DL(data)</b>		<b>x</b>	<p>PIA2 Service Improvement through Digital Aeronautical Information Management</p> <p>PIA1 Improve Traffic flow through Runway Sequencing (AMAN/DMAN)</p> <p>PIA1 Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2) *</p> <p>PIA2 Meteorological information supporting enhanced operational efficiency and safety</p> <p>PIA3 Air Traffic Situational Awareness(ATSA)</p>	<p>B0-DAIM</p> <p>B0-RSEQ</p> <p>B0-SURF</p> <p>B0-AMET</p> <p>B0- ASEP</p>
<b>Maintain an acceptable QoS</b>	<b>AMS/AFS</b>	<b>Identification of AFI Required Communication Performance (RCP)</b>	<b>Implementation of RCP</b>		<b>x</b>	<p>PIA 1 Improve Traffic flow through runway Sequencing (AMAN/DMAN)</p> <p>PIA1 Increased Runway Throughput through optimized Wake Turbulence Separation.</p> <p>PIA1 Improved Airport Operations through Airport –CDM</p>	<p>B0-RSEQ</p> <p>B0- WAKE</p> <p>B0 ACDM</p>

						PIA2 Service improvement through Digital Aeronautical Information Management	B0-DIAM
						PIA 2 Meteorological information supporting enhanced operational efficiency and safety.	B0-MET
						PIA2 Increased interoperability efficiency and capacity through ground-ground integration.	BO-ICE
						PIA 3 Improved operations through Enhanced En-Route Trajectories.	BO-FRTO
						PIA3 Improved flow performance through planning based on Network-wide view.	B0-NOPS
						PIA3 Air Traffic Situational awareness (ATSA)	B0-ASEP
						PIA3 Improved access to optimum Flight levels through Climb/Descent Procedures using ADS-B.	B0-OPF
						PIA3 Increased effectiveness of ground –	B0-SNET

						<p>based safety Nets.</p> <p>PIA4.Improved flexibility and Efficiency in Decent profiles(CDO).</p> <p>PIA4Improved safety and efficiency through the initial application of Data link En –Route</p> <p>PIA4 Improved Flexibility and Efficiency Departure profiles- Continuous Climb Operations (CCO</p>	<p>B0-CDO</p> <p>B0-TBO</p> <p>B0-CCO</p>
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