



# ICAO ASBU Implementation Monitoring Questionnaire

V.3 – 10/11/2015

Please fill in the information highlighted in yellow.

In each Module, a number of relevant actions is provided that define the actions to be taken in order to implement the concerning Module. Please note the list of relevant actions is not exhaustive, more information related to the relevant actions can be found in the ESSIP Plan 2015 - <http://www.eurocontrol.int/articles/essip-plan>

Annex A presents the guidance on how to determine the progress of each Module.

Annex B contains the detailed description of relevant actions for Priority 1 Modules.

Annex C includes the detailed description of relevant actions for Other Block 0 Modules.

### **Requested information on Block 0, Priority 1 Modules**

<State>

#### **B0-APTA**

<b>NAV10</b>	<b>Implement APV procedures</b>		
<b>Optimization of Approach Procedures including vertical guidance</b>		12/2018	<b>Status</b>
<b>Relevant actions:</b> <ul style="list-style-type: none"> <li>Design and Publish APV/Baro and/or APV/SBAS procedures</li> <li>Publish in AIPs all coordinates data in WGS-84 in accordance with ICAO Annex 15 requirements</li> </ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			

#### **B0-SURF**

<b>AOP04.1</b>	<b>Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level1</b>		
<b>Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)</b>		12/2018	<b>Status</b>
<b>Relevant actions:</b> <ul style="list-style-type: none"> <li>Install required surveillance equipment</li> <li>Publish A-SMGCS Level 1 procedures (including transponder operating procedures) in national aeronautical information publications</li> <li>Implement approved A-SMGCS operational procedures at airports equipped with A-SMGCS</li> <li>Equip Ground vehicles</li> <li>Mandate the carriage of required equipment</li> </ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			

<b>AOP04.2</b>	<b>Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level 2</b>		
<b>Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)</b>		12/2018	<b>Status</b>
<b>Relevant actions:</b> <ul style="list-style-type: none"> <li>Install required A-SMGCS control function equipment</li> <li>Implement approved A-SMGCS Level 2 operational procedures at airports equipped with A-SMGCS Level 2</li> </ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			

## **B0-FICE**

<b>ITY-COTR</b>	<b>Implementation of ground-ground automated coordination processes</b>		
<b>Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration</b>		12/2015	<b>Status</b>
<b>Relevant actions:</b> <ul style="list-style-type: none"> <li>Implement flight data processing and exchange systems</li> <li>Implement processes such as, Notification; Initial Coordination; Revision of Coordination, etc.</li> </ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			

<b>ATC17</b>	<b>Electronic Dialogue as Automated Assistance to Controller during Coordination and Transfer</b>		
<b>Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration</b>		12/2015	<b>Status</b>
<b>Relevant actions:</b> <ul style="list-style-type: none"> <li>Upgrade and put into service ATC system to support the Basic procedure (specifically PAC and COD)</li> <li>Upgrade and put into service ATC system to support electronic dialogue procedure in Transfer of communication process</li> <li>Upgrade and put into service ATC system to support electronic dialogue procedure in Coordination process</li> <li>Develop safety assessment for the changes</li> </ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			

<b>ITY-FMTP</b>	<b>Apply a common flight message transfer protocol (FMTP)</b>		
<b>Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration</b>		12/2015	<b>Status</b>
<b>Relevant actions:</b> <ul style="list-style-type: none"> <li>Upgrade and put into service communication systems to support information exchange via FMTP between FDPS(s) for the purpose of notification, coordination and transfer of the flights between ATC units</li> <li>Develop safety assessment for the changes</li> </ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			

## B0-DATM

<b>INF04</b>	<b>Implement integrated briefing</b>		
<b>Service Improvement through Digital Aeronautical Information Management</b>		12/2015	<b>Status</b>
Relevant actions: <ul style="list-style-type: none"><li>Implement integrated briefing</li></ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			

<b>ITY-ADQ</b>	<b>Ensure quality of aeronautical data and aeronautical information</b>		
<b>Service Improvement through Digital Aeronautical Information Management</b>		12/2015	
Relevant actions:			
<ul style="list-style-type: none"><li>Implement a quality management system (QMS)</li></ul>		<b>Completion Date</b>	<b>Status</b>
<ul style="list-style-type: none"><li>Implement data quality requirements</li></ul>		<b>Completion Date</b>	<b>Status</b>
<ul style="list-style-type: none"><li>Implement the common dataset and digital exchange format</li></ul>		<b>Completion Date</b>	<b>Status</b>
<ul style="list-style-type: none"><li>Establish formal arrangements</li></ul>		<b>Completion Date</b>	<b>Status</b>
<b>Explain how and when you intend to complete this objective</b>		<b>Final Completion Date</b>	<b>Overall Status</b>

## B0-ACAS

<b>ATC16</b>	<b>Implement ACAS II compliant with TCAS II change 7.1</b>		
<b>ACAS Improvements</b>		12/2015	<b>Status</b>
Relevant actions: <ul style="list-style-type: none"><li>Deliver operational approval for ACAS II version 7.1 equipped aircraft</li><li>Establish ACAS II (TCAS II version 7.1) performance monitoring</li><li>Obtain airworthiness certification for ACAS II version 7.1 equipped aircraft</li><li>Obtain operational approval for ACAS II version 7.1 equipped aircraft</li></ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			

**B0-SNET**

<b>ATC02.2</b>	<b>Implement ground based safety nets – Short Term Conflict Alert (STCA) - level 2</b>		
<b>Increased Effectiveness of Ground-Based Safety Nets – STCA</b>		<b>12/2018</b>	<b>Status</b>
Relevant actions: <ul style="list-style-type: none"><li>• Conduct safety oversight of the changes</li><li>• Implement the STCA function</li><li>• Develop safety assessment of the changes</li></ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			
<b>ATC02.5</b>	<b>Implement ground based safety nets - Area Proximity Warning - level 2</b>		
<b>Increased Effectiveness of Ground-Based Safety Nets – APW</b>		<b>12/2018</b>	<b>Status</b>
Relevant actions: <ul style="list-style-type: none"><li>• Implement the APW function</li></ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			
<b>ATC02.6</b>	<b>Implement ground based safety nets - Minimum Safe Altitude Warning - level 2</b>		
<b>Increased Effectiveness of Ground-Based Safety Nets – MSAW</b>		<b>12/2018</b>	<b>Status</b>
Relevant actions: <ul style="list-style-type: none"><li>• Implement the MSAW function</li></ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			

## Additional information on other Block 0 Modules

### B0-ACDM

<b>AOP05</b>	<b>Implement Airport Collaborative Decision Making (CDM)</b>	<b>01/2016</b>	
<b>Improved Airport Operations through Airport- CDM</b>		-	<b>Status</b>
<b>Relevant actions:</b> <ul style="list-style-type: none"> <li>Define and implement local Air Navigation Service (ANS) procedures for information sharing through Letters of Agreement (LoAs) and/or Memorandum of Understanding (MoU)</li> <li>Define and implement local procedures for turnaround processes</li> <li>Define and implement variable taxi-time and pre-departure sequencing procedure</li> <li>Define and implement procedures for CDM in adverse conditions, including the de-icing</li> </ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			

### B0-RSEQ

<b>ATC07.1</b>	<b>Implement arrival management tools</b>	<b>12/2015</b>	
<b>Improve Traffic flow through Runway Sequencing (AMAN/DMAN)</b>		-	<b>Status</b>
<b>Relevant actions:</b> <ul style="list-style-type: none"> <li>Implement initial basic arrival management tools</li> <li>Implement initial basic AMAN procedures</li> <li>Adapt TMA organisation to accommodate use of basic AMAN</li> <li>Implement basic AMAN functions</li> </ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			

<b>ATC15</b>	<b>Implement, in En-Route operations, information exchange mechanisms, tools and procedures in support of Basic AMAN operations</b>	<b>12/2017</b>	
<b>Improve Traffic flow through Runway Sequencing (AMAN/DMAN)</b>		-	<b>Status</b>
<b>Relevant actions:</b> <ul style="list-style-type: none"> <li>Develop safety assessment for the changes</li> <li>Adapt the ATC systems that will implement arrival management functionality in En-Route sectors in support of AMAN operations in adjacent/subjacent TMAs</li> <li>Implement ATC procedures in En-Route airspace/sectors that will implement AMAN information and functionality</li> </ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			

## B0-FRTO

<b>AOM19</b>	<b>Implement Advanced Airspace Management</b>	<b>12/2016</b>	
<b>Improved Operations through Enhanced En-Route Trajectories</b>		-	<b>Status</b>
<b>Relevant actions:</b> <ul style="list-style-type: none"><li>• Implement Rolling ASM/ATFCM process</li><li>• Optimise flexible airspace structure design and availability</li><li>• Improve accuracy of airspace booking.</li><li>• Implement an improved Notification Process supporting the Rolling ASM/ATFCM process</li><li>• Deploy automated ASM support systems</li></ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			
<b>NAV03</b>	<b>Implementation of P-RNAV</b>	<b>12/2012</b>	
<b>Improved Operations through Enhanced En-Route Trajectories</b>		-	<b>Status</b>
<b>Relevant actions:</b> <ul style="list-style-type: none"><li>• Develop and implement RNAV arrival and departure procedures for P-RNAV approved aircraft</li><li>• Provide appropriate terrestrial navigation infrastructure to support RNAV operations</li><li>• Install appropriate RNAV equipment</li><li>• Implement P-RNAV routes where identified as providing benefit</li><li>• Develop a Local P-RNAV Safety Case</li></ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			

## B0-NOPS

<b>FCM01</b>	<b>Implement enhanced tactical flow management services</b>	<b>12/2006</b>	
<b>Improved Flow Performance through Planning based on a Network-Wide view</b>		-	<b>Status</b>
<b>Relevant actions:</b> <ul style="list-style-type: none"><li>• Supply ETFMS (Enhanced Tactical Flow Management System) with Basic Correlated Position Data</li><li>• Supply ETFMS with Standard Correlated Position Data</li><li>• Receive and process ATFM data from the NM</li><li>• Inform NM of flight activations and estimates for ATFM purposes</li><li>• Inform NM of re-routings inside FDP for ATFM purposes</li><li>• Inform NM of aircraft holding for ATFM purposes</li><li>• Supply NM with Departure Planning Information (DPI)</li></ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			
<b>FCM06</b>	<b>Traffic Complexity Assessment</b>	<b>12/2021</b>	
<b>Improved Flow Performance through Planning based on a Network-Wide view</b>		-	<b>Status</b>
<b>Relevant actions:</b> <ul style="list-style-type: none"><li>• Implement Local Traffic Load Management tool</li><li>• Implement Local Traffic Complexity tools and procedures</li><li>• Provide EFD (ETFMS Flight Data) to the local traffic complexity tools</li></ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			

## B0-ASUR

<b>ITY-SPI</b>	<b>Surveillance performance and interoperability</b>	<b>12/2019</b>	
<b>Initial capability for ground surveillance</b>		-	<b>Status</b>
<b>Relevant actions:</b> <ul style="list-style-type: none"> <li>• Conduct safety oversight for the existing surveillance chain</li> <li>• Ensure interoperability of surveillance data</li> <li>• Conduct Safety Assessment for the existing surveillance chain</li> <li>• Conduct Safety Assessment for changes introduced to the surveillance infrastructure</li> <li>• Carriage and operation of Mode S Elementary Surveillance</li> <li>• Carriage and operation of ADS-B Out</li> </ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			

## B0-CDO

<b>ENV01</b>	<b>Implement Continuous Descent Operations (CDO) techniques for environmental improvements</b>	<b>12/2013</b>	
<b>Improved Flexibility and Efficiency in Descent Profiles (CDO)</b>		-	<b>Status</b>
<b>Relevant actions:</b> <ul style="list-style-type: none"> <li>• Coordinate activities and implement rules and procedures for the application of CDO techniques whenever practicable in Approach Control Service in close cooperation with aircraft operators</li> <li>• Support CDO measures, implement monitoring of performance and feedback to ANSP and users where equipment is available. Provide the main link with the local community</li> <li>• Include CDO techniques in the aircrew training manual and support its implementation wherever possible</li> </ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			

## B0-TBO

<b>ITY-AGDL</b>	<b>Initial ATC air-ground data link services above FL-285</b>	<b>02/2015</b>	
<b>Improved Safety and Efficiency through the initial application of Data Link En-Route</b>		-	<b>Status</b>
<b>Relevant actions:</b> <ul style="list-style-type: none"> <li>• Ensure the publication of relevant information in the national aeronautical information publication</li> <li>• Ensure ATN/VDL-2 availability, security policy and address management Procedures</li> <li>• Ensure ground communication systems comply with air-ground communication requirements</li> <li>• Deploy communication infrastructure to handle air-ground data link services</li> <li>• Ensure the conformity of communications, flight data and initial flight plan processing systems and associated procedures</li> <li>• Equip aircraft with data link equipment supporting the identified services</li> <li>• Specify relevant operational procedures</li> <li>• Arrange air-ground ATS data link service provision</li> </ul>		<b>Completion Date</b>	
<b>Explain how and when you intend to complete this objective</b>			



## Annex A: ICAO ASBU monitoring – guidance and template

The following colours apply to the assessment of progress of each implementation objective and for each ICAO EUR State, where maps are used to illustrate progress.

<div style="display: flex; flex-direction: column; gap: 10px;"> <div style="display: flex; align-items: center;"><span style="width: 20px; height: 15px; background-color: #006400; margin-right: 5px;"></span> Completed</div> <div style="display: flex; align-items: center;"><span style="width: 20px; height: 15px; background-color: #90EE90; margin-right: 5px;"></span> Partially Completed</div> <div style="display: flex; align-items: center;"><span style="width: 20px; height: 15px; background-color: #FFFF00; margin-right: 5px;"></span> Planned</div> <div style="display: flex; align-items: center;"><span style="width: 20px; height: 15px; background-color: #FF8C00; margin-right: 5px;"></span> Late</div> </div>	<div style="display: flex; flex-direction: column; gap: 10px;"> <div style="display: flex; align-items: center;"><span style="width: 20px; height: 15px; background-color: #FF0000; margin-right: 5px;"></span> No Plan</div> <div style="display: flex; align-items: center;"><span style="width: 20px; height: 15px; background-color: #808080; margin-right: 5px;"></span> Not Applicable</div> <div style="display: flex; align-items: center;"><span style="width: 20px; height: 15px; border: 1px solid black; margin-right: 5px;"></span> Missing Data</div> </div>
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Definitions of individual progresses have been defined as follows in the LSSIP documents:

“Progress”	“Progress” Definition
<b>Completed</b>	<p>The development or improvement aimed by the Objective is reportedly fulfilled (it is either in operational use or there is reported on-going compliance by the stakeholder(s) as applicable).</p> <p>Relevant info should be provided confirming the completion, e.g. reference(s) to a national plan or publication(s), evidences of compliance with relevant national regulations, an audit confirming compliance or completion etc.</p>
<b>Partially Completed</b>	<p>Implementation is reportedly on-going, however not yet fully completed:</p> <ul style="list-style-type: none"> <li>• Most of the actions are completed or implemented, <b>but</b> the aimed development or improvement is not yet operational; <b>or</b></li> <li>• The development or improvement aimed through this objective is operational, <b>but</b> compliance with the applicable requirements or specifications is only partially achieved.</li> </ul> <p>The Stakeholder’s situation must be briefly but clearly explained in the “Comment” field, so that the reader may understand what is the current status and what are the local plans/schedule to achieve full completion.</p>
<b>Planned</b>	<ul style="list-style-type: none"> <li>• A <b>planned schedule</b> and <b>proper (budgeted) action</b> are specified; <b>and</b></li> </ul> <p>The level of implementation so-far does not qualify the objective as “Partially Completed”.</p>
<b>Late</b>	<ul style="list-style-type: none"> <li>• Part or all of the actions leading to completion of the objective are “Planned” to be achieved <b>after</b> the ESSIP target date; <b>or</b> their implementation is ongoing but will be achieved <b>later</b> than that date; <b>or</b></li> <li>• None or only too little actions have started vs. the timing needed for full implementation/ completion; <b>or</b></li> <li>• The ESSIP target date is already exceeded.</li> </ul>
<b>No Plan</b>	<p><b>1)</b> The Stakeholder has reviewed the Objective and:</p> <p style="padding-left: 20px;">a) has no intention (yet) to plan or implement it (implying that the Stakeholder has given some consideration to the Objective and its possible benefits), <b>or</b></p> <p style="padding-left: 20px;">b) has not (yet) a defined or approved implementation plan and/or budget for the Objective concerned</p> <p>In the 1<sup>st</sup> situation, the Stakeholder should provide a clear rationale for his decision; while in the 2<sup>nd</sup> situation, the Stakeholder should at least provide a statement of intentions. <b>Or</b></p> <p><b>2)</b> The Stakeholder has neither reviewed the Objective nor considered its participation in the Objective concerned. The Stakeholder <b>must</b> then provide a statement of intentions.</p>
<b>Not Applicable</b>	<p>The Objective is found to be <b>not applicable</b> for this Stakeholder or State.</p> <p><b>Important: Do not confuse with “No Plan”:</b></p> <p>So the difference between “No Plan” and “N/A” is like between “does not want to; has no intention” and “is not able to; cannot because of a justified reason”.</p>
<b>Missing Data</b>	<p>Lack of data from a Stakeholder makes it <b>impossible to define “Progress”</b>, for a State.</p> <p>“Missing Data” can be used as another means to challenge the Stakeholders for more consistent info, when other requests have failed. This is one of the ways in which can be indicated to the Stakeholders that the Agency considers insufficient or cannot accept their inputs so far for that particular SLoA/ Stakeholder/ Objective.</p>

## Annex B: Detailed description of relevant actions for Priority 1 Modules

The objective of this Annex is to provide more detailed information on the activities required for the actions indicated in the questionnaire associated to each ESSIP Objective. More information can be found in ESSIP Plan 2015:

<http://www.eurocontrol.int/articles/essip-plan>

### B0-APTA

<b>NAV10</b>	<b>Implement APV procedures</b>
<b>Optimization of Approach Procedures including vertical guidance</b>	
<ul style="list-style-type: none"> <li>• <b>Design and Publish APV/Baro and/or APV/SBAS procedures</b> - Develop APV procedures at all instrument runway ends, either as the primary approach or as a back-up for precision approaches. The APV level to be implemented at different locations depends upon local requirements. This action includes the following tasks: <ul style="list-style-type: none"> <li>- Identify runways where APV should be introduced;</li> <li>- Design APV procedures;</li> <li>- Publish APV procedures in national AIPs.</li> </ul> </li>   <li>• <b>Publish in AIPs all coordinates data in WGS-84 in accordance with ICAO Annex 15 requirements</b> - It is an essential requirement for RNAV procedures that all coordinates data published in AIPs, e.g. Runway Thresholds, Navigation Aids, Waypoints, etc, are surveyed with reference to the WGS84 standard. Following survey which may be undertaken in accordance with the Eurocontrol standard for WGS 84 survey (Doc 006), the data must be maintained with adequate integrity.</li> </ul>	

### B0-SURF

<b>AOP04.1</b>	<b>Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level1</b>
<b>Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)</b>	
<ul style="list-style-type: none"> <li>• <b>Install required surveillance equipment</b> - Install all the surveillance equipment and related systems as specified in the functional specifications for A-SMGCS, in order to enable aerodrome controllers to locate and identify aircraft and vehicles on the manoeuvring area (in co-operation with Airport operators, as appropriate).</li>   <li>• <b>Publish A-SMGCS Level 1 procedures (including transponder operating procedures) in national aeronautical information publications</b> - Incorporate the agreed and validated A-SMGCS Level 1 operating procedures into national aeronautical information publications.</li>   <li>• <b>Implement approved A-SMGCS operational procedures at airports equipped with A-SMGCS</b> - Develop and apply agreed and validated A-SMGCS Level 1 procedures as an integral part of the aerodrome control service.</li>   <li>• <b>Equip Ground vehicles</b> - Ensure vehicles operating on the manoeuvring area of airports equipped with A-SMGCS Level 1 are equipped with the necessary systems as specified in the functional specifications for A-SMGCS, to provide their position and identity to the A-SMGCS Level 1 surveillance system.</li>   <li>• <b>Mandate the carriage of required equipment</b> - Mandate the equipment of aircraft operating into airports equipped with A-SMGCS Level 1 with the necessary systems to provide their position and identity to the A-SMGCS Level 1 surveillance system.</li> </ul>	

<b>AOP04.2</b>	<b>Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level 2</b>
<b>Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)</b>	

- **Install required A-SMGCS control function equipment** - Install A-SMGCS control function systems in order to enable the detection of conflicts & intrusions in accordance with A-SMGCS Level 2 requirements (in co-operation with ANSPs, as appropriate). Such equipment should be provided in addition to the equipment requirements for A-SMGCS Level 1.
- **Implement approved A-SMGCS Level 2 operational procedures at airports equipped with A-SMGCS Level 2** - Apply agreed and validated A-SMGCS Level 2 procedures as an integral part of the aerodrome control service.

## **B0-FICE**

### **ITY-COTR**

### **Implementation of ground-ground automated co-ordination processes**

#### **Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration**

- **Implement flight data processing and exchange systems** - The system shall provide all the information required for the display, processing and compilation of the system information exchanged in the process specified.
- **Implement processes such as, Notification; Initial Coordination; Revision of Coordination, etc.**  
- Implement a process of initial coordination of flight between ATC units.

The Initial Coordination process satisfies the following operational requirements: - Replace the verbal boundary estimate by transmitting automatically details of a flight from one ATC unit to the next prior to the transfer of control; - Update the basic flight plan data in the receiving ATC unit with the most recent information; - Facilitate distribution and display of flight plan data within the receiving ATC unit to the working positions involved; - Enable display of correlation in the receiving ATC unit; - Provide transfer conditions to the receiving ATC unit.

The Revision of Coordination process is used to transmit revisions to co-ordination data previously sent in an Initial Coordination message provided that the accepting unit does not change as a result of the modification.

**ATC17****Electronic Dialogue as Automated Assistance to Controller during Coordination and Transfer****Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration**

- **Upgrade and put into service ATC system to support the Basic procedure (specifically PAC and COD)** - When bilaterally agreed between ANSPs, upgrade and put into service ATC system to support the Basic procedure, specifically Preliminary Activation Message (PAC) and, if applicable, SSR Code Assignment Message (COD).
- **Upgrade and put into service ATC system to support electronic dialogue procedure in Transfer of communication process** - When bilaterally agreed between ANSPs, upgrade and put into service ATC system to support electronic dialogue procedure in Transfer of communication process using OLDI.
- **Upgrade and put into service ATC system to support electronic dialogue procedure in Coordination process** - When bilaterally agreed between ANSPs, upgrade and put into service ATC system to support electronic dialogue procedure in Coordination process using OLDI.
- **Develop Safety case for the changes** - Develop safety assessment of the changes, notably upgrades of the system to support Electronic Dialogue during Coordination and Transfer. The tasks to be done are as follows:
  - Conduct hazard identification, risk assessment in order to define safety objectives and safety requirements mitigating the risks;
  - Develop safety assessment;
  - Deliver safety assessment to the NSA, if new standards are applicable or if the severity class of identified risks is 1 or 2.This safety assessment shall be based on fully validated/recognised method.

**ITY-FMTP****Apply a common flight message transfer protocol (FMTP)****Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration**

- **Upgrade and put into service communication systems to support information exchange via FMTP between FDPS(s) for the purpose of notification, coordination and transfer of the flights between ATC units** - Ensure that the communication systems supporting the coordination procedures between ATC units using a peer-to-peer communication mechanism and providing services to general air traffic shall apply the flight message transfer protocol (FMTP). The tasks to be performed are as follows:
  - Define requirements based on relevant standards/regulations;
  - Upgrade communication systems to comply with defined requirements;
  - Verify compliance with Interoperability Regulation(s);
  - Integrate upgraded communication systems into the EATM Network;
  - Put into service upgraded communication systems.
- **Develop safety assessment for the changes** - Notify the NSA of planned changes and develop safety assessments of the changes for the upgrades of communication systems which support information exchange using a peer-to-peer communication mechanism via FMTP between FDPS(s). The tasks to be performed are as follows:
  - Notify the NSA of planned changes;
  - Conduct hazard identification, risk assessment in order to define safety objectives and safety requirements mitigating the risks;
  - Develop safety assessment;
  - Deliver a safety assessment report to the NSA, if new standards are applicable or if the severity class of identified risks is 1 or 2.This safety assessment shall be based on fully validated/recognised method.

**B0-DATM****INF04****Implement integrated briefing**

### Service Improvement through Digital Aeronautical Information Management

- **Implement integrated briefing** - Implement and provide integrated briefing function. The data required during the pre-flight phase is provided and presented into one package in a flexible manner. This is about integrating all information relevant to a flight (AIS, Flight Plan, MET and ATFM) into one single output that can be tailored to the user-s needs.  
**Note: Level 5 is optional** and it defines a single report to be provided by systems. At this level full integration is achieved and a single front-end application is used to access the briefing services. However these may have separate background applications hidden from the user. Level five allows the various briefing products (MET, AIS etc.) to be combined into a single output which may be tailored as requested by the pilot.

### ITY-ADQ

### Ensure quality of aeronautical data and aeronautical information

### Service Improvement through Digital Aeronautical Information Management

- **Implement a quality management system (QMS)** – Implement and maintain a Quality Management System for the provision of Aeronautical Information Services. An ISO 9001 certificate issued by an appropriate accredited organisation shall be considered as a sufficient means of compliance. Additionally safety management and security management objectives are included in the QMS as described in Art 10 of EU regulation 73/2010. As part of the QMS it should be ensured that personal responsible for tasks in the provision of Aeronautical data/information are adequately trained, competent and authorised for the job they are required to do.
- **Implement data quality requirements** – Implement the data quality requirements as per Annex 15, in terms of completeness, timeliness, consistency, accuracy, resolution and integrity.
- **Implement the common dataset and digital exchange format** Aeronautical Data/Information shall be provided according to a common dataset specification (IAIP, TOD, Aerodrome Mapping Data) (reference Annex 15), ensuring that the data and information are transferred in accordance with the data exchange format requirements (AIXM).
- **Establish formal arrangements** between Aeronautical Information providers and data originators for the exchange of Aeronautical data/information.

## B0-ACAS

ATC16	Implement ACAS II compliant with TCAS II change 7.1
<b>ACAS Improvements</b>	
<ul style="list-style-type: none"><li>• <b>Deliver operational approval for ACAS II version 7.1 equipped aircraft</b> - The tasks to be done are as follows:<ul style="list-style-type: none"><li>- Instruction of the certification application file delivered by the applicant in accordance with the appropriate certification process;</li><li>- Approval of pertinent training programs, checklists, operations manuals or training manuals, maintenance programs, minimum equipment lists or other pertinent documents or document revisions applicable to that operator.</li></ul></li> <li>• <b>Establish ACAS II (TCAS II version 7.1) performance monitoring</b> - Establish a monitoring of the performance of ACAS in the ATC environment, as described in PANS-ATM (Procedures for Air Navigation Services - ICAO Doc. 4444 Fifteenth Edition 2007-ATM/501)</li> <li>• <b>Obtain airworthiness certification for ACAS II version 7.1 equipped aircraft</b> - Provide a certification application case to the competent authority for the state of registry of the aircraft to obtain airworthiness certification for their airframes equipped with ACAS II equipment.</li> <li>• <b>Obtain operational approval for ACAS II version 7.1 equipped aircraft</b> - In order to obtain operational approval by the Competent authority of the State from which they hold an Air Operator Certificate, operators must provide evidence which pertains to:<ul style="list-style-type: none"><li>- Changes to training and maintenance programmes;</li><li>- Changes to manuals, operational procedures, minimum equipment lists; and</li><li>- Other areas necessary for safe and effective TCAS use and the qualification of aircrews through the approved training programmes.</li></ul></li></ul>	

## B0-SNET

ATC02.2	Implement ground based safety nets – Short Term Conflict Alert (STCA) - level 2
<b>Increased Effectiveness of Ground-Based Safety Nets – STCA</b>	
<ul style="list-style-type: none"><li>• <b>Conduct safety oversight of the changes</b> - Verify that a safety assessment is conducted and review the safety assessment report before acceptance. Conduct the safety oversight of changes introduced by the introduction of Short Term Conflict Alert - level 2 ground safety net. The tasks to be done are as follows:<ul style="list-style-type: none"><li>- Analyse the provided safety assessment in detail;</li><li>- Review safety arguments provided in the safety assessment report;</li><li>- Notify the ANSP/ANS by written letter of the accepted change.</li></ul>The safety case shall be developed in accordance with a validated / recognised safety assessment method.</li> <li>• <b>Implement the STCA function</b> - Implement STCA systems and associated procedures in line with EUROCONTROL Specification and related guidance material in En-Route airspace, applicable TMAS and Military ATC units providing radar services.</li> <li>• <b>Develop safety assessment of the changes</b> - Develop safety assessment of the changes, notably ATC systems and procedures that will implement Short Term Conflict Alert (STCA) - level 2 functionality and associated procedures. The tasks to be done are as follows:<ul style="list-style-type: none"><li>- Conduct hazard identification, risk assessment in order to define safety objectives and safety requirements mitigating the risks;</li><li>- Develop safety assessment;</li><li>- Deliver a safety assessment report to the NSA, if new standards are applicable or if the severity class of identified risks is 1 or 2.</li></ul>This safety assessment shall be based on fully validated/recognised method.</li></ul>	

ATC02.5	Implement ground based safety nets - Area Proximity Warning - level 2
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<b>Increased Effectiveness of Ground-Based Safety Nets – STCA</b>
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| <ul style="list-style-type: none"><li>• <b>Implement the APW function</b> - Put into service ground-based safety tool systems and associated procedures supporting the APW function in En-Route airspace, applicable TMAs and Military ATC units providing surveillance services.</li></ul> |
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<b>ATC02.6</b>
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<b>Implement ground based safety nets - Minimum Safe Altitude Warning - level 2</b>
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<b>Increased Effectiveness of Ground-Based Safety Nets – STCA</b>
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| <ul style="list-style-type: none"><li>• <b>Implement the MSAW function</b> - Put into service ground-based safety tool systems and associated procedures supporting the MSAW function.</li></ul> |
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## Annex C: Detailed description of relevant actions for Other Block 0 Modules

The objective of this Annex is to provide more detailed information on the activities required for the actions indicated in the questionnaire associated to each ESSIP Objective. More information can be found in ESSIP Plan 2015:

<http://www.eurocontrol.int/articles/essip-plan>

### **B0-ACDM**

<b>AOP05</b>	<b>Implement Airport Collaborative Decision Making (CDM)</b>
<b>Improved Airport Operations through Airport- CDM</b>	
<ul style="list-style-type: none"><li>• <b>Define and implement local Air Navigation Service (ANS) procedures for information sharing through Letters of Agreement (LoAs) and/or Memorandum of Understanding (MoU)</b> - Agree, define and implement local procedures for information sharing and information management systems based on A-CDM Implementation Manual, in co-operation with other stakeholders involved.(consult the supporting material for AOP05 concerning full references of A-CDM Manuals) <a href="http://www.eurocontrol.int/sites/default/files/content/documents/official-documents/reports/2015-essipplan-detailedobjectives.pdf">http://www.eurocontrol.int/sites/default/files/content/documents/official-documents/reports/2015-essipplan-detailedobjectives.pdf</a>.</li><li>• <b>Define and implement local procedures for turnaround processes</b> - Define and implement local procedures for turnaround processes (milestone approach) based on A-CDM Implementation Manual and through LoAs.</li><li>• <b>Define and implement variable taxi-time and pre-departure sequencing procedure</b> - Agree, define and implement local procedures for pre-departure sequencing taking into account preferences based on A-CDM Implementation Manual, in co-operation with other stakeholders involved.</li><li>• <b>Define and implement procedures for CDM in adverse conditions, including the de-icing</b> - Agree, define and implement local CDM procedures to manage adverse conditions based on A-CDM Implementation Manual, in co-operation with other stakeholders involved.</li></ul>	

### **B0-RSEQ**

<b>ATC07.1</b>	<b>Implement arrival management tools</b>
<b>Improve Traffic flow through Runway Sequencing (AMAN/DMAN)</b>	
<ul style="list-style-type: none"><li>• <b>Implement initial basic arrival management tools</b></li><li>• <b>Implement initial basic AMAN procedures</b> - Define, validate and implement ATC procedures for operational use of basic AMAN tools.</li><li>• <b>Adapt TMA organisation to accommodate use of basic AMAN</b></li><li>• <b>Implement basic AMAN functions</b> - Prepare and adapt ground ATC systems to support and implement basic AMAN functions.</li></ul>	



<b>ATC15</b>	<b>Implement, in En-Route operations, information exchange mechanisms, tools and procedures in support of Basic AMAN operations</b>
<b>Improve Traffic flow through Runway Sequencing (AMAN/DMAN)</b>	
<ul style="list-style-type: none"> <li>• <b>Develop safety assessment for the changes</b> - Develop safety assessment of the changes, notably ATC systems and procedures that will implement arrival management functionality in En-Route sectors and associated procedures. The tasks to be done are as follows: <ul style="list-style-type: none"> <li>- Conduct hazard identification, risk assessment in order to define safety objectives and safety requirements mitigating the risks;</li> <li>- Develop safety assessment;</li> <li>- Deliver a safety assessment report to the NSA, if new standards are applicable or if the severity class of identified risks is 1 or 2.</li> </ul> This safety assessment shall be based on fully validated/recognised method. </li>   <li>• <b>Adapt the ATC systems that will implement arrival management functionality in En-Route sectors in support of AMAN operations in adjacent/subjacent TMAs</b> – Implement, in selected ATC systems, the necessary functionality and information exchanges to support the use of AMAN information in En-Route sectors requiring data exchange generated from AMAN systems and operations in adjacent/subjacent TMAs.</li>   <li>• <b>Implement ATC procedures in En-Route airspace/sectors that will implement AMAN information and functionality</b> - Define, validate and implement the necessary ATC procedures in selected En-Route airspace/sectors, to support the use of AMAN information in En-Route sectors that are interfacing with AMAN systems operating in adjacent/subjacent TMAs.</li> </ul>	

**B0-FRTO**

<b>AOM19</b>	<b>Implement Advanced Airspace Management</b>
<b>Improved Operations through Enhanced En-Route Trajectories</b>	
<ul style="list-style-type: none"> <li>• <b>Implement Rolling ASM/ATFCM process</b> - Implement Rolling ASM/ATFCM process comprising the following: <ul style="list-style-type: none"> <li>- Introduce Rolling airspace update process by providing for draft UUP reflecting any change in airspace use planning as described in the ASM Handbook;</li> <li>- Consider advice by the NM to re-consider UUP;</li> <li>- Submit UUP to NM as described in the ASM Handbook.</li> </ul> </li>   <li>• <b>Optimise flexible airspace structure design and availability</b> - Create CDRs and DCT, when appropriate, as a function of vertical and lateral sub-modular manageable areas design. Harmonise CDR and DCT, when appropriate, design and availability at national level (if affecting adjacent ATS units). The same applies at bilateral or sub-regional level.</li>   <li>• <b>Improve accuracy of airspace booking</b> - Improve planning and allocation of reserved/segregated airspace at pre-tactical ASM level 2 in order to increase accuracy. Plan reserved/segregated airspace utilization in accordance with actual need. Release reserved/segregated non used airspace as soon as activity stops. Utilize reserved/segregated airspace that has not been planned in AUP (ad-hoc allocation procedure 3).</li>   <li>• <b>Implement an improved Notification Process supporting the Rolling ASM/ATFCM process</b> - Adapt flight planning operations to benefit from dynamic airspace changes. React to airspace changes as notified by means of electronic Airspace Management Information Message (eAMI) via B2B service, Re-Routing Proposal Message (RRP) and Network Operation Plan (NOP). Improve usage of route opportunity tool.</li>   <li>• <b>Deploy automated ASM support systems</b> - Improve ASM system support by using either national or EUROCONTROL (Local and Regional ASM Application - LARA) automated support system in airspace planning and allocation. Use simulation tool for ASM to access optimum airspace allocation.</li> </ul>	
<b>NAV03</b>	<b>Implementation of P-RNAV</b>
<b>Improved Operations through Enhanced En-Route Trajectories</b>	

- **Develop and implement RNAV arrival and departure procedures for P-RNAV approved aircraft** - Design, develop and implement RNAV arrival and departure procedures, and continuous descent approaches and declare these in the appropriate AIPs.
- **Provide appropriate terrestrial navigation infrastructure to support RNAV operations** – Implement P-RNAV using basic GNSS (i.e. standalone GPS without ground or space based augmentations with RAIM and possibly also with Inertial Augmentation) or DME/DME modes of navigation. However, RNAV procedures are dependent upon sufficient DME transponders being distributed geographically to allow for DME/DME navigation in the absence of onboard GNSS equipment or GNSS failure. This requirement may mean new DME stations and/or the relocation of existing stations.
- **Install appropriate RNAV equipment** – Install equipment meeting TGL 10. Where existing RNAV/FMS equipment meets only B-RNAV requirements, there will be a need to update or replace the systems. Many aircraft are already equipped with RNAV/FMS meeting TGL 10. For these it will be necessary to gain regulatory approval which will include operational approval for the application of the system on P-RNAV routes.
- **Implement P-RNAV routes where identified as providing benefit** - Implement P-RNAV routes where such implementation can be demonstrated to provide additional capacity and where the implementation of such routes can be identified as operationally acceptable.
- **Develop a Local P-RNAV Safety Case** - Demonstrate that the implementation of the new P-RNAV procedures designed is safe. The Safety Case shall comply with the ESARRs and shall take into account the national requirements established by the Regulatory Authorities. The P-RNAV Safety Argument could be used as a basis for the development of the Local P-RNAV Safety Case.

## **B0-NOPS**

<b>FCM01</b>	<b>Implement enhanced tactical flow management services</b>
<b>Improved Flow Performance through Planning based on a Network-Wide view</b>	
<ul style="list-style-type: none"><li>• <b>Supply ETFMS with Basic Correlated Position Data</b> - Provide ETFMS (Enhanced Tactical Flow Management System) with correlated Position Data for all airborne flights inside its Flight Data Processing Area. For the initial implementation of ETFMS, the NM accepts a limited number of existing message formats.</li><li>• <b>Supply ETFMS with Standard Correlated Position Data</b> - Provide ETFMS with Correlated Position Data for all airborne flights inside its Flight Data Processing Area in ASTERIX Category 062 format.</li><li>• <b>Receive and process ATFM data from the NM</b> - Ensure that all ATFM messages received from the NM are automatically correlated to the ATC Flight Plan data. The ATFM data is automatically presented to the Air Traffic Controllers (as a minimum to the TWR Controllers) on strips or on electronic displays.</li><li>• <b>Inform NM of flight activations and estimates for ATFM purposes</b> - Send to NM a First System Activation (FSA) message as evidence of flight activations in the local ATC system. The FSA informs the NM of the actual position of the aircraft (i.e: the actual time of departure or the time and flight level at the FDPA entry co-ordination point).</li><li>• <b>Inform NM of re-routings inside FDPA for ATFM purposes</b> - Send an FSA message for flights for a route change which does not affect the exit point and when this information has not already been sent by an AFP message.</li><li>• <b>Inform NM of aircraft holding for ATFM purposes</b> - Send an FSA to inform the NM that the flight is holding.</li><li>• <b>Supply NM with Departure Planning Information (DPI)</b> - Supply the NM/ETFMS with flight data related updates that are only available shortly before departure. The DPI is used to supply the NM with the taxi-time and SID per flight and with the Take-Off Time based upon the departure sequence.</li></ul>	

<b>FCM06</b>	<b>Traffic Complexity Assessment</b>
<b>Improved Flow Performance through Planning based on a Network-Wide view</b>	
<ul style="list-style-type: none"><li>• <b>Implement Local Traffic Load Management tool</b> - The automated tools shall support the continuous monitoring of the traffic loads per network node (sector, waypoint, route, route-segment) according to declared capacities and provide support to the local resource management.</li><li>• <b>Implement Local Traffic Complexity tools and procedures</b> - Local traffic Complexity assessment tools shall receive process and integrate EFD (ETFMS Flight Data) provided by NM.</li><li>• <b>Provide EFD to the local traffic complexity tools</b> - Provide the EFD data to the local FDPSs.</li></ul>	

## **B0-ASUR**

ITY-SPI	Surveillance performance and interoperability
<b>Initial capability for ground surveillance</b>	
<ul style="list-style-type: none"><li>• <b>Conduct safety oversight for the existing surveillance chain</b> - Verify that the necessary safety assessments for the existing surveillance chain (systems identified in Art. 2.1 (b), (c) and (d) of Regulation (EU) No 1207/2011 (SPI-IR)), as required by Art 9.1 of the Regulation are conducted by the parties concerned and review, as appropriate, the safety assessment report(s) before their acceptance. Note : 'existing' refers to systems in place at the date of entry into force of Regulation (EU) 1207/2011</li><li>• <b>Ensure interoperability of surveillance data</b> - As required by Article 5(1) of the Regulation (EU) No 1207/2011 (SPI-IR), air navigation service providers shall ensure interoperability of all surveillance data transferred from their ground-based surveillance systems and their surveillance data processing systems to other navigation service providers are subject to a common protocol.</li><li>• <b>Conduct Safety Assessment for the existing surveillance chain</b> - Conduct a safety assessment: for all existing ground-based surveillance systems, surveillance data processing systems and ground-to-ground communications systems used for the distribution and processing of surveillance data, as required in Art. 9.1 and Annex VI of SPI-IR.</li><li>• <b>Conduct Safety Assessment for changes introduced to the surveillance infrastructure</b> - Conduct a safety assessment of the changes introduced to systems and associated procedures, identified in Art. 2.1 (b), (c) and (d) of SPI-IR in order to achieve compliance with Article 9.2 of the aforementioned regulation. The tasks to be done are as follows:<ul style="list-style-type: none"><li>- Conduct hazard identification, risk assessment in order to define safety objectives and safety requirements mitigating the risks;</li><li>- Develop safety assessment;</li><li>- Deliver a safety assessment report to the NSA, if new standards are applicable or if the severity class of identified risks is 1 or 2.</li></ul>This safety assessment shall be based on fully validated/recognised method.</li><li>• <b>Carriage and operation of Mode S Elementary Surveillance</b> - Equip and certify for operational use of secondary surveillance radar transponders having the Mode S Elementary Surveillance capability, as set out in Part A of Annex II of the SPI-IR, the State aircraft operating as GAT in accordance with IFR rules.</li><li>• <b>Carriage and operation of ADS-B Out</b> - Equip with and certify for operational use of Mode S Enhanced Surveillance and ADS-B Out on 1090 Extended Squitter avionics, as set out in Part B and Part C of Annex II of the SPI-IR the transport-type State aircraft operating as GAT in accordance with IFR rules with a maximum certified take-off mass exceeding 5 700 kg or having a maximum cruising true airspeed capability greater than 250 knots. This is in addition to the capability set out in Part A of that Annex (Mode S Elementary Surveillance).</li></ul>	

## B0-CDO

<b>ENV01</b>	<b>Implement Continuous Descent Operations (CDO) techniques for environmental improvements</b>
<b>Improved Flexibility and Efficiency in Descent Profiles (CDO)</b>	
<ul style="list-style-type: none"><li>• <b>Coordinate activities and implement rules and procedures for the application of CDO techniques whenever practicable in Approach Control Service in close cooperation with aircraft operators</b> - Provide the tactical and operational situational awareness support to allow aircrew to apply CDO.</li><li>• <b>Support CDO measures, implement monitoring of performance and feedback to ANSP and users where equipment is available. Provide the main link with the local community</b> - In partnership with ANSPs and airlines select the most appropriate form of CDO from guidance material, to support activities and to report performance feedback to allow continual improvement.</li><li>• <b>Include CDO techniques in the aircrew training manual and support its implementation wherever possible</b> - Provide suitable training, ensure awareness and encourage application of CDO techniques.</li></ul>	

## B0-TBO

<b>ITY-AGDL</b>	<b>Initial ATC air-ground data link services above FL-285</b>
<b>Improved Safety and Efficiency through the initial application of Data Link En-Route</b>	
<ul style="list-style-type: none"><li>• <b>Ensure the publication of relevant information in the national aeronautical information publication</b> - Ensure that relevant information on the use of data link services is published in the national aeronautical information publications [Regulation (EC) No 29/2009, Article 13(8)].</li><li>• <b>Ensure ATN/VDL-2 availability, security policy and address management Procedures</b> - Member States which have designated ATS providers in the applicable airspace shall:<ul style="list-style-type: none"><li>- Ensure that air-ground communications services satisfying requirements for ATN and VDL-2 are available to operators for aircraft flying within that airspace under their responsibility for CM and CPDLC data exchanges, with due regard to possible coverage limitations inherent in the communication technology used [Regulation (EC) No 29/2009, Article 7(1)];</li><li>- Ensure that air navigation service providers and other entities providing communication services implement an appropriate security policy for data exchanges of the DLIC, ACM, ACL and AMC services, notably by applying common security rules to protect distributed physical resources supporting those data exchanges [Regulation (EC) No 29/2009, Article 7(2)];</li><li>- Ensure that harmonised procedures apply for the management of addressing information in order to unambiguously identify air and ground communications systems supporting data exchanges of the CM and CPDLC air/ground applications [Regulation (EC) No 29/2009, Article 7(3)].</li></ul></li><li>• <b>Ensure ground communication systems comply with air-ground communication requirements</b> - Entities providing communication services shall ensure that the ground communication systems and their constituents apply air-ground communications for CM and CPDLC data exchanges in compliance with Article 9 of Regulation (EC) No 29/2009, allowing either ATN/VDL-2 or an alternative communication technology.</li><li>• <b>Deploy communication infrastructure to handle air-ground data link services</b> - Ensure that the entities providing communication services for data exchanges of the air-ground applications deploy the appropriate telecommunication infrastructure (e.g. based on ATN/VDL-Mode 2).</li></ul>	

- **Ensure the conformity of communications, flight data and initial flight plan processing systems and associated procedures** - Ensure that air-ground communications systems, flight data processing systems and human-machine interface systems serving ATS units providing service to general air traffic within the applicable airspace areas comply with the following articles of Regulation (EC) No 29/2009:

  - Article 1(3) on the operational coverage;
  - Article 3(1) on the capability to provide and operate the DLIC, ACM, ACL and AMC data link services;
  - Article 4 on procedures for CPDLC establishment, operation and termination, and for the filing of flight plans regarding information pertaining to data link capability;
  - Article 5(1) on ground systems support of CM and CPDLC;
  - Article 5(2) on seamless provision, message set and integrity requirements of end-to-end communications for data exchanges of the CM and CPDLC air-ground applications;
  - Article 5(3) on service level agreement for communication services for CM and CPDLC data exchanges that may be provided by other organisations (i.e. CSPs);
  - Article 5(4) on ensuring that data exchanges can be established with all compliant aircraft flying in the airspace under their responsibility;
  - Article 5(5) on automated notification, coordination and transfer of flights between ATC units (Note that this requires implementation of LOF/NAN processes in accordance with Regulation (EC) No 1032/2006 - as complemented by Regulation (EC) No 30/2009 - refer to SES-related implementation objective ITY-COTR);
  - Article 5(6) on performance monitoring;
  - Article 9 on the application of air-ground communications in ground communication systems and their constituents for CM and CPDLC data exchanges, allowing either ATN/VDL-2 or an alternative communication technology;
  - Article 13(1) and (2) on the ground-based recording of data link communications.
  
- **Equip aircraft with data link equipment supporting the identified services** - Their aircraft operating IFR/GAT flights within the applicable airspace above FL285 have the capability to operate the DLIC, ACM, ACL and AMC services [Article 1.(2).2 of COMMISSION IMPLEMENTING REGULATION 2015/310]

  - Aircraft air-ground communication systems and their constituents support the CM and CPDLC air-ground applications [Regulation (EC) No 29/2009, Article 6(1)];
  - Aircraft air-ground communication systems and their constituents apply end-to-end communications for data exchanges of the CM and CPDLC air-ground applications in compliance with Regulation (EC) No 29/2009, Article 6(2);
  - Aircraft air-ground communication systems and their constituents apply air-ground communications for data exchanges of the CM and CPDLC air-ground applications in compliance with Regulation (EC) No 29/2009, Article 6(3), allowing either ATN/VDL-2 or an alternative communication technology.
  
- **Specify relevant operational procedures** - Specify and apply common standardised procedures consistent with relevant ICAO provisions for CPDLC establishment, operation and termination, and for the filing of flight plans regarding information pertaining to data link capability, in compliance with Regulation (EC) No 29/2009, Article 4.
  
- Arrange air-ground ATS data link service provision** - Make appropriate arrangements (with a CSP) to ensure that data exchanges can be established between their aircraft and all ATS units which may control the flights they operate in the applicable airspace, with due regard to possible coverage limitations inherent in the communication technology used [Regulation (EC) No 29/2009, Article 6(4)].

- END -