



EUROPEAN COMMISSION

Brussels, 8.10.2012

C(2012) 6943 final

**COMMISSION IMPLEMENTING DECISION**

**of 8.10.2012**

**on the adoption of the European Union's position on the approval of a modification to the European Air Traffic Management Master Plan.**

## COMMISSION IMPLEMENTING DECISION

of 8.10.2012

### on the adoption of the European Union's position on the approval of a modification to the European Air Traffic Management Master Plan.

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Council Regulation (EC)No 219/2007<sup>1</sup>, and in particular Articles 5(2), 5(4) and 6(3) thereof,

Whereas:

- (1) The European Union, represented by the European Commission, is a founding member of the SESAR Joint Undertaking and has a seat on its Administrative Board.
- (2) The Executive Director of the SESAR Joint Undertaking has presented to the Administrative Board on 10 February 2012 a proposal for a significant modification of the European ATM Master Plan (Master Plan).
- (3) In accordance with Article 4(6) of the Statutes of the SESAR Joint Undertaking, decisions relating to the approval of modifications to the Master Plan must be voted for by the founding members.
- (4) The position of the European Union as regards decisions concerning the adoption or the significant modifications of the Master Plan is adopted by the European Commission after consulting the Single Sky Committee in accordance with Articles 5 and 7 of Decision 1999/468/EC.
- (5) The measures provided for in this Decision are in accordance with the opinion of the Single Sky Committee,

HAS DECIDED AS FOLLOWS:

#### *Article 1*

The position of the European Union concerning the proposal of the SESAR Joint Undertaking for a modification of the Master Plan, set out in the Annex, is adopted.

#### *Article 2*

The Commission authorises its representative on the Administrative Board of the SESAR Joint Undertaking to present this Decision as the European Union's position.

---

<sup>1</sup> OJ L 064, 02/03/2007, p. 1-11. .

Done at Brussels,

*For the Commission*

*Vice-President*

## ANNEX

### **THE POSITION OF THE EUROPEAN UNION ON THE PROPOSAL OF THE SESAR JOINT UNDERTAKING FOR A MODIFICATION TO THE EUROPEAN ATM MASTER PLAN**

1. The EU welcomes the proposal (the proposal) to update the European ATM Master (Master Plan) and congratulates the SESAR Joint Undertaking on the work it has achieved within a limited time.

The EU wishes to emphasise that the Master Plan is and will remain an roadmap that will be adapted as necessary to provide a common basis for synchronised and coordinated performance-driven and deployment-oriented R&D activities.

The Master Plan is not intended to provide a basis for firm decisions on what should be deployed and when.

2. Although the proposal satisfies most of its expectations, the EU's approval is subject to the following requests and comments being taken into account by the SESAR Joint Undertaking:

- (a) The stakeholders' executive summaries provide a valuable analysis of the Master Plan. The EU requests that the 4 executive summaries concerning airspace users, air navigation service providers, airport operators and the military be updated to reflect the latest improvements in the Master Plan included in the proposal and made accessible through the website of the Master Plan.

- (b) In 2005, the Commission set high-level goals for the Single European Sky (SES) to be met by 2020 and beyond. In the current context, this vision remains the desired high-level political vision for SES and to which SESAR is a significant but not the only contributor. A review of these SES high-level goals should be organised, but at SES level. Consequently, the EU requests that the entire text in Chapter 2.1 of the proposal be replaced by the following text:

*The SES High Level goals are political targets set by the Commission with the support of the Single Sky Committee. The scope of the SES High-Level Goals is the full ATM performance outcome resulting from the combined implementation of the SES pillars and instruments as well as industry developments not driven directly by the EU.*

*In 2005, the Commission stated its political vision and set high-level goals for the SES to be met by 2020 and beyond. It should:*

- *enable a 3-fold increase in capacity which will also reduce delays both on the ground and in the air;*
- *improve safety by a factor of 10;*
- *enable a 10% reduction in the effects flights have on the environment and;*
- *provide ATM services to the airspace users at a cost of at least 50% less.*

*As early as 2008, the definition phase of SESAR concluded that with SESAR's contribution, SES could achieve the following targets by 2020<sup>2</sup>:*

- a 73 % increase in capacity from 2004;*
- an associated improvement in safety so that the total number of ATM-induced accidents and serious or risk bearing incidents would not increase despite traffic growth;*
- a 10 % reduction per flight in environmental impact compared to 2005; and*
- a 50 % reduction in cost per flight compared to 2004.*

*In the 2012 context, the '2005 vision' remains as the high-level, desired political vision for SES and one to which SESAR is a significant but not the only contributor. The other SES pillars will also contribute; for example, the Network Strategy Plan will specify contributions stemming from the Network Management Functions. Then, in line with this vision, the performance scheme and the associated reference periods bring further refinements, defining precise and binding, short-term or medium-term performance targets.*

*On the occasion of the Council's endorsement of the initial ATM Master Plan, it was agreed that the SESAR contribution to the high-level goals set by the Commission should be continuously reviewed by the SESAR Joint Undertaking and kept up to date through future versions of the ATM Master Plan.*

*Today, as a direct consequence of this continuous review and based on early results from the development phase, SESAR is now targeting for deployment baseline and step 1 to enable, as compared to 2005 performance:*

- a 27 % increase in air-space capacity;*
- an associated improvement in safety so that the total number of ATM-induced accidents and serious or risk bearing incidents does not increase despite traffic growth generated by SESAR (i.e. through air-space and airport-capacity increase);*
- a 2.8 % reduction per flight in environmental impact;*
- a 6 % reduction in cost per flight.*

*More details of SESAR's contribution are provided in Chapter 2.4.'*

- (c) The SES strategic performance objectives aim to interpret SES high-level goals in terms of more practical and measurable Key Performance Indicators (KPI) that are relevant for defining research and development (R&D) activities and validation targets. However, the KPIs used to define strategic objectives in Chapter 2.2.2/Table 1 and the validation targets in Chapter 2.4.2/Figures 4 to 8 of the proposal are slightly different. Considering the comments raised by this issue, the EU requests that the text in Chapter 2.2.2 be replaced by the following one:

*'The European Commission high-level goals for SES provide the political vision of the performance-driven approach. They should be complemented by more specific and measurable Key Performance Indicators (KPIs) to capture*

---

<sup>2</sup> SESAR Master Plan, April 2008 (D5), §2.1.1.

network performance trends and define success criteria. This need is met by the following strategic performance objectives. They reconcile the SES high-level goals with more practical and measurable KPIs of greater relevance to the definition of R&D activity (SESAR). They are set out in Table 1, based on the best current estimation of traffic growth.

Since the SES high-level goals are general in nature, they need to be interpreted and re-expressed. The proposed Strategic Performance Objectives are driven by the SES high-level goals and set in accordance with the performance targets of the performance scheme. Therefore, they provide the more measurable and practical long-term guidance that can serve as the basis for R&D and long-term deployment planning. The proposed Strategic Performance Objectives are of an indicative nature, whereas medium-term and short-term deployment is driven by binding Performance Scheme targets.’

**Table 1: Proposed Strategic Performance Objectives at European Network Level and SESAR Contribution<sup>3</sup>**

<b>Key Performance Area (KPA)</b>	<b>Key Performance Indicator (KPI)</b>	<b>Strategic Objectives (as compared to 2005)</b>	<b>SESAR Baseline + Step 1 Contribution (as compared to 2005)</b>
<b>Safety</b>			
<b>Improve safety performance by a factor of 10</b>			
ECAC annual accidents	No increase in the number of accidents with ATM contribution per annum	No increase — irrespective of traffic growth	No increase — irrespective of traffic increase addressed by SESAR
Safety risk	Safety risk per flight hour	No increase — irrespective of traffic growth	-40%
<b>Capacity</b>			
<b>Enable a 3-fold increase in ATM capacity to be deployed where needed</b>			
Airspace capacity	En-route capacity	x 3	+27%
Airport capacity	Runway capacity for best-in-class Airports		+14%

<sup>3</sup> Sources for 2005 and 2010 values: Safety, Environment — PRR2010; Delay — PRR2004 & PRR2010; Cost Efficiency — derived from PRR2004 & draft PRR2011.

<b>Environment</b>	<b>Enable a 10 % reduction in the effects flights have on the environment</b>		
<i>Flight Efficiency</i>	<i>Gate-to-gate overall ANS related CO<sub>2</sub> Emissions Index (2005=100; per flight)</i>	-10%	-2.8%
<b>Cost Efficiency</b>	<b>Provide ATM services at a unit cost to the airspace users which is at least 50% less</b>		
<i>Direct ANS Cost per Flight</i>	<i>Total annual en-route and Terminal ANS cost in Europe, €2005/flight</i>	-50%	-6%

The KPIs defined in the above table differ from the KPIs of the Performance Scheme. For reference, the Performance Scheme RPI EU-wide targets are:

- *Environment / Flight efficiency: improve by 0.75 points the horizontal-flight efficiency indicator (as compared to 2009)*
- *Cost-efficiency: achieve an average en-route Determined Unit Rate<sup>4</sup> of €53.92 in 2014, as against €59.97 in 2011 (in euros at 2009 prices)*
- *Capacity: reduce en-route ATFM delay to 0.5 minutes per flight*

*Beyond the performance improvement expected from the Deployment Baseline, achieving the 2014 performance targets will require significant improvements driven by other SES initiatives — notably a performance scheme, FABs and cooperative initiatives coordinated through the Network Strategy Plan. SESAR capabilities currently under development are expected to contribute in the medium term.'*

- (d) The notion of essential operational changes will be key in building the future deployment programme through which the Master Plan will be implemented. Those essential changes must be unambiguously identified in Chapters 3.3, 3.4 and 3.5 of the proposal. Consequently, the EU requests that the table below be inserted as an Annex to the Master Plan, with cross references to Chapters 3.2 to 3.5 as needed.

<sup>4</sup>

*The Determined Unit Rate KPI adopted by the Performance Scheme in RPI sets a target on En-route ANS cost per Service Unit. The strategic performance objective KPI of cost per flight is wider in scope as it also covers the Terminal navigation costs, for which 'flights' is a more appropriate denominator..*

**Table 16: Synthesis of SESAR baseline and step 1 essential operational changes**

Key features	Essential Operational Changes	
	Baseline or Baseline supporting STEP 1	STEP1
Moving from air-space to 4D trajectory management	<p><b>Baseline only:</b></p> <ul style="list-style-type: none"> <li>– Approach Procedure with Vertical Guidance (APV)</li> </ul> <p><b>Baseline supporting STEP 1:</b></p> <ul style="list-style-type: none"> <li>– Civil/Military Air-space &amp; aeronautical data coordination</li> <li>– A/G data link</li> <li>– CPDLC</li> </ul>	<ul style="list-style-type: none"> <li>– Trajectory management and business/mission trajectory</li> <li>– System interoperability with A/G data sharing</li> <li>– Free routing</li> </ul>
Traffic synchronisation	<p><b>Baseline supporting STEP 1:</b></p> <ul style="list-style-type: none"> <li>– Basic AMAN</li> </ul>	<ul style="list-style-type: none"> <li>– I4D+CTA</li> <li>– Integrated AMAN, DMAN &amp; extended AMAN horizon</li> </ul>
Network Collaborative Management and Dynamic/Capacity Balancing	<p><b>Baseline only:</b></p> <ul style="list-style-type: none"> <li>– Basic dynamic sectorisation</li> </ul> <p><b>Baseline supporting STEP 1:</b></p> <ul style="list-style-type: none"> <li>– Basic network operation planning</li> </ul>	<ul style="list-style-type: none"> <li>– Network operation planning</li> </ul>
SWIM	<p><b>Baseline supporting STEP 1:</b></p> <ul style="list-style-type: none"> <li>– exchange models</li> <li>– IP based network</li> </ul>	<ul style="list-style-type: none"> <li>– Initial SWIM services</li> </ul>
Airport Integration and Throughput	<p><b>Baseline only:</b></p> <ul style="list-style-type: none"> <li>– Continuous Climb Departure (CCD)</li> <li>– Continuous Descent Approach (CDA)</li> </ul> <p><b>Baseline supporting STEP 1:</b></p> <p>Airport CDM</p> <ul style="list-style-type: none"> <li>– A-SMGCS levels 1&amp;2</li> </ul>	<ul style="list-style-type: none"> <li>– Surface management integrated with arrival and departure</li> <li>– Airport safety nets</li> </ul>
Conflict Management and Automation	<p><b>Baseline only:</b></p> <ul style="list-style-type: none"> <li>– Performance Based Navigation (PBN) — optimised Required Navigation Performance (RNP) route structures</li> <li>– Short Term Conflict Alert (STCA)</li> </ul> <p><b>Baseline supporting STEP 1:</b></p> <ul style="list-style-type: none"> <li>– Initial controller assistance tools</li> </ul>	<ul style="list-style-type: none"> <li>– Enhanced decision-support tool and performance-based navigation</li> <li>– Conflict detection and resolution</li> </ul>

- (e) The EU requests that the SESAR Joint Undertaking perform an intermediate Master Plan update, to be approved by mid-2013, focused on the business view. In particular, the campaign shall address the following issues:



- inclusion of consolidated costs for all stakeholders for baseline and step 1, in particular an assessment of the ‘realistic cost’ for air navigation service providers<sup>5</sup> and the inclusion of military costs;
- inclusion of time allocation in accordance with stakeholders’ road maps in the deployment view;
- providing broad figures of the costs for steps 2 and 3;
- clarify assumptions, in particular the ‘reference’ scenario against which the ‘basic’ and ‘target’ scenarios for step 1 are compared;
- assessment of the benefits for all stakeholders building on the SESAR Joint Undertaking's latest validation results of release 2012 and the performance assessment;
- assessment of the outcome of ICAO's Air Navigation Conference 2012;
- update of the SESAR risk-management plan and refinement of its mitigation actions.

The EU further requests that a sentence is inserted in the update 2012 of the Master Plan to inform about the upcoming ad-hoc update 2013 and highlight the information subject to the update 2013.

(f) The EU requests that the next full update of the Master Plan:

- Includes reporting on achieved results in implementing the Master Plan: the Master Plan is to provide high level information on SESAR’s achievements by the date of the update, both for R&D and deployment, including comparing validation results with the validation targets and a proposal for additional activities to address potential performance gaps;
- Assesses the validity of the essential operational changes based on additional validation results, agreed second reference period (RP2) performance targets and early consideration of potential third period (RP3) performance targets;
- Further refines stakeholder's roadmaps through a better analysis of ground systems evolution cycles;
- Further analyses the regulatory and standardisation framework proposed in the Master Plan, including safety regulation activities by the European Aviation Safety Agency, and takes into account any additional regulatory and standardisation actions decided by the Single Sky Committee;
- Assesses the consistency of the Network Strategy Plan with the Master Plan, ensuring in particular the same classification of the operational changes which are common to both plans (essential/priority or non-essential/non-priority). For instance: ‘Dynamic sectorisation’ is a priority change according to the draft Network Strategy Plan whereas it is not an essential change in the proposal. Such inconsistencies are to be resolved jointly by the SESAR Joint Undertaking and the Network Manager;

---

<sup>5</sup> The cost for air navigation service providers might be included already in this update cycle 2012 of the Master Plan with an explanatory note.

- Continues the refinement and monitoring of the SESAR risk-management plan and the associated mitigation actions.
- (g) The yearly updates of the European Single Sky Implementation (ESSIP) plan constitute updates of Level 3 of the Master Plan. These updates are not considered significant modifications of the Master Plan, as referred to in Article 5(4) of Regulation (EC) 219/2007, and are accordingly approved by the Administrative Board of the SESAR Joint Undertaking.