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**COMMISSION STAFF WORKING DOCUMENT**  
**EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT**

*Accompanying the document*

**Legislative proposals**

**to update the regulations on the Single European Sky — SES2+**

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# COMMISSION STAFF WORKING DOCUMENT

## EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT

### *Accompanying the document*

#### **Legislative proposals**

#### **to update the regulations on the Single European Sky — SES2+**

### **1. PROBLEM DEFINITION**

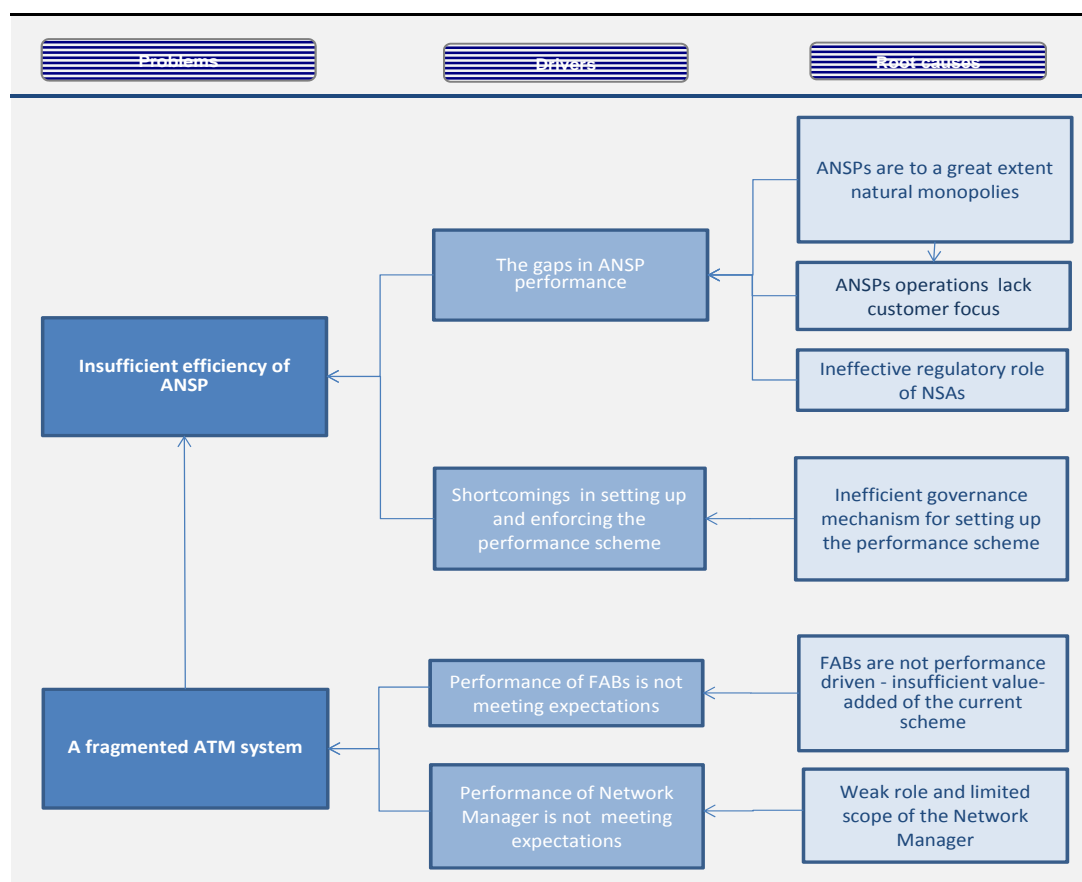
The Single European Sky (SES) initiative aims to improve the overall efficiency of the way in which European airspace is organised and managed. The experience gained with SES I since 2004 and SES II since 2009 has shown that the principles and direction of the SES are valid and warrant a continuation of their implementation. But the initiative is experiencing delays in its implementation. The SES 2+ package should improve implementation of SES II by focusing on certain institutional matters, as well as on further performance improvement of air navigation service provisions.

The first problem area addressed in the SES2+ impact assessment is **the insufficient efficiency of Air Navigation Service (ANS) provision**. ANS provision remains relatively inefficient in terms of cost- and flight efficiency, as well as of capacity offered. This is clear when compared with the United States, which covers airspace of a similar size. In the US, the airspace is controlled by a single service provider, as opposed to 38 en-route service providers in Europe. The US service provider controls almost 70 % more flights with 38 % fewer staff. The main causes for this difference in productivity are Europe's shortcomings in setting up and enforcing the performance scheme, ineffective supervisory authorities and the disproportionately high number of support staff working for the service providers.

The second key problem addressed is a **fragmented ATM system**. The European ATM system consists of 27 national authorities overseeing over a hundred Air Navigation Service Providers (ANSPs), with the expected differences in systems, rules and procedures. There are many additional costs caused by Europe having a large number of service providers, each procuring their own systems, mostly training their own staff, creating their own operating procedures and being limited territorially to providing services in a small airspace. To overcome fragmentation, the SES has introduced the idea of cross-border Functional Air Blocks (FABs) and a centralised Network Manager to run certain network-level services. However, FABs are not yet performance-oriented and the Network Manager remains too weak.

The SES 2+ initiative will affect most ANSPs, Member State authorities, airspace users, the Commission and EASA.

## Problems, drivers and root causes



## 2. SUBSIDIARITY

Articles 58, 90, and 100 of the Treaty on the Functioning of the European Union extend to air transport the objectives of the internal market in the context of a Common EU Transport Policy.

Actions by Member States alone cannot ensure the optimal building of capacity and safety, whilst reducing the cost levels of EU air traffic management services. In agreeing to the SES I and SES II packages, Member States acknowledged that fragmentation of European airspace, driven by national rules and geographical borders, is at the centre of the problem.

## 3. OBJECTIVES

### General objective:

Improve the competitiveness of the European Aviation system vis-à-vis other comparable regions, and in particular develop further the Single European Sky initiative

### Specific objectives:

SO1: Improve performance of Air Traffic Services in terms of efficiency

SO2: Improve utilisation of air traffic management capacity

### Operational objectives:

OO1: Ensure that the provision of Air Navigation Services is transparent, based on market principles and customer value.

OO2: Strengthen the role of the National Supervisory Authorities

OO3:	Strengthen the process of setting up targets and enforcing the performance scheme (including the reinforcement of the Performance Review Body/Performance Review Unit (PRB/PRU))
OO4:	Strategic redirection of FABs
OO5:	Strengthen the governance and operational scope of the Network Manager

#### 4. POLICY OPTIONS

Based on analysis and stakeholder consultation, a broad set of measures in six policy domains have been identified, all with the potential to address all the problem drivers described above.

Root cause of problem areas	Policy domains	Policy options considered
<b>Problem Area 1: Insufficient efficiency of Air Navigation Service provision</b>		
ANSPs are to a great extent natural monopolies	1: Support services	1.1 — Do nothing
		1.2 — Functional separation of support services
		1.3 — Structural separation of support services
ANSP operations lack customer focus	2: Focusing ANSPs on customer needs	2.1 — Do nothing
		2.2 — Improved consultation and sign-off on certain investment plans by airspace users.
		2.3 — 2.2 plus giving airspace user groups a role in ANSP governance
Ineffective regulatory role of NSAs	3: Ineffective role of NSAs	3.1 — Do nothing.
		3.2 — Introduce mutual cooperation, EU-level coordination and pooling of experts
		3.3 — 3.2 plus institutional separation of NSAs from the ANSPs
Inefficient governance mechanism for setting up the performance scheme	4: Performance scheme governance mechanism	4.1 — Do nothing
		4.2 — Reduced Member State involvement in the target setting process. The PRB under Commission supervision.
		4.3 — Allow Member States to directly nominate the PRB, but let the PRB set targets itself, without comitology.
<b>Problem Area 2: A fragmented ATM system</b>		
FABs are not performance-driven, and the current set-up has insufficient added value	5: Refocusing of FABs	5.1 — Do nothing.
		5.2 — Create more prescriptive and enforceable targets/criteria for FABs
		5.3 — Create a more flexible and performance-driven FAB model
		5.4 — Top-down approach, with a new entity created from the PRB and the Network Manager to design service provision
Weak role and limited scope of the Network Manager	6: The role of the Network Manager	6.1 — Do nothing
		6.2 — Move operational governance to industry and simplify EU and state governance of strategic matters
		6.3 — Create a joint undertaking of industry to run the Network Manager
		6.4 — As option 6.2 or 6.3, but with a role for Eurocontrol built around the Network Manager and a more comprehensive centralised service provider, and including airspace design in the broad sense

**Policy Option 1: Support services<sup>1</sup>.** The first option is to do nothing (1.1). Support services can also be functionally (option 1.2) or structurally (option 1.3) separated. In case of functional separation, ANSPs would need to internally organise provision of support services, so that these can be clearly distinguished as a separate business unit. If structural separation is chosen, assets and staff required for support service provision would be transferred to a separate organisation independent from the core air traffic control service provider.

**Policy Option 2: Focusing ANSPs on customer needs.** The first option is to do nothing (2.1). The second option (2.2) requires improved airspace user consultation and enables airspace user-groups to ‘sign-off’ on ANSP investment plans. Option 2.3 builds on option 2.2 by adding a compulsory management/supervisory board seat for each of the three airspace user groups (airlines, military aviation and general/business aviation).

**Policy Option 3: Ineffective role of National Supervisory Authorities (NSAs).** The first option is to do nothing (3.1). Option 3.2 focuses on creating closer cooperation between the NSAs and encouraging exchange of best practice and pooling of national experts under EASA. Option 3.3 builds on option 3.2 but requires NSAs’ full institutional separation from the ANSPs they oversee, instead of the current functional separation.

**Policy Option 4: Performance scheme governance mechanism.** If the *do nothing* option (4.1) is chosen, it would be impossible to reach the initial 2020 SES objectives. With option 4.2, the process of setting targets would be shortened and the possibility for Member State influence would be reduced. Option 4.3 would turn the existing setting upside-down by allowing Member States (instead of the Commission) to nominate PRB members, while adhering to strict independence criteria. The PRB would then set targets itself and the comitology process would be entirely eliminated to ensure process speed and efficiency.

**Policy Option 5: Refocusing of FABs.** The *do nothing* option (5.1) would enable the slow process to continue and wouldn’t increase the FABs’ focus on performance. Option 5.2 would replace the current FAB criteria with prescriptive targets. Option 5.3 would make the FABs more flexible tools for improving performance. Airspace design would be increasingly moved to the Network Manager (the level above FABs). In option 5.4, a central planning entity would be created to redesign EU airspace based on 4-6 major concession blocks.

**Policy Option 6: The role of the Network Manager.** In the *do nothing* option (6.1), the Network Manager would continue to develop based on the current legal scope and functions. In option 6.2, a two-level governance system would be created. Member States would still retain a veto right in matters relevant to national sovereignty, but industry would ensure operational governance. In option 6.3, the Network Manager would become an Industry Joint Undertaking. Like options 6.2 and 6.3, option 6.4 would require governance reform to improve industry’s role. A key additional feature of option 6.4 is the concept of centralised services in which certain new ATM services driven by SESAR-related data would be centralised.

## 5. ASSESSMENT OF IMPACT

Given the strong focus on cost-efficiency, the main impacts of this initiative are economic and social, whilst the environmental impacts are mostly indirect.

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<sup>1</sup> Services such as aeronautical information, communication, navigation, surveillance or meteorology, which support the core air traffic service providers.

### **5.1. Integrated structure and support services**

Option 1.2 (*functional separation*) brings limited benefits, mainly in terms of transparency of costs related to support services. Option 1.3 (*structural separation*) is more likely to encourage ANS competition and drive down costs for air operators. However, efficiency gains could result in more demanding working conditions and reduced employment in the ANSPs. Hence, option 1.3 is the most performance-optimised one, while option 1.2 brings incremental performance improvements with fewer redundancies and distress for ANSP employees.

### **5.2. Focusing ANSPs on customer needs**

Both option 2.2. (*improved consultation and sign-off*) and 2.3. (*governance board*) would have a positive impact on overall efficiency and capacity, but also some negative impact on employment conditions in ANSPs. While the benefits of option 2.3 are marginally higher than those of option 2.2, option 2.3 carries higher risks and would be more difficult to implement politically. Therefore, option 2.2 seems to have the best balance between short- and long-term costs and benefits.

### **5.3. Ineffective role of NSAs**

Option 3.3, which adds institutional separation to option 3.2 (*mutual cooperation and expert pooling*), gives higher benefits, but there are high associated political risks. Although the risks associated with option 3.2 are lower, its benefits are also significantly smaller. Therefore, option 3.3 is the preferred one.

### **5.4. Performance scheme governance mechanism**

Options 4.2 and 4.3 have similar broad outcomes, but carry major differences in associated (political) risks. For option 4.2 (*reduced Member State involvement*), the risk is linked to the likelihood of Member States achieving agreement on the proposal. Option 4.3 (*direct nomination of the PRB by Member States, without comitology*) carries a considerable risk of the EU losing control of the performance scheme. The choice is based on the risk assessment, which tips the scales in favour of option 4.2.

### **5.5. Refocusing of FABs**

Option 5.4 (*top-down FABs*) has by far the highest possible efficiency and capacity benefits, but is also politically very difficult to implement and contains some serious technical feasibility risks. Option 5.3 (*flexible FABs*) provides roughly the same benefits as option 5.2 (*prescriptive targets*), but is better aligned with the underlying principles of the performance scheme. It also carries additional potential if combined smartly with other options. It could therefore be recommended as the preferred option, on the condition that a deadline is set for revising the FAB concept.

### **5.6. Role of the network manager**

Option 6.4 (*Eurocontrol as expanded Network Manager*) brings the greatest efficiency and capacity benefits. The only question is whether it should be combined with the governance model in option 6.2 (*operational governance by industry*) or 6.3 (*industry Joint Undertaking*). Option 6.3 has a slight edge, because the organisation could seek efficiencies more actively if it is fully industry-run than if the Member States in governance continue to defend their national *status quos*. Since the Network Manager providing centralised services would be an ANSP like any other, it would be logical to favour industry management and choose a combination of options 6.4 and 6.3 as the preferred option.

## 6. COMPARISON OF OPTIONS

In total, 20 policy options in 6 different policy domains were assessed. The options were further combined to form 3 policy scenarios:

Policy scenario 1: Baseline	Policy scenario 2: Risk-optimised	Policy scenario 3: Performance-optimised
Do nothing	Option 1.2 Functional separation of support services	Option 1.3 Structural separation of support services
	Option 2.2 Improved consultation and sign-off	Option 2.2 Improved consultation and sign-off
	Option 3.2 Mutual cooperation and expert pooling	Option 3.3 3.2+ Institutional separation of NSAs from ANSPs
	Option 4.2 Reduced Member State involvement	Option 4.2 Reduced Member State involvement
	Option 5.2 Prescriptive FAB targets	Option 5.3 Flexible FABs
	Option 6.3 Industry Joint Undertaking	Options 6.4+6.3 Industry Joint Undertaking + Eurocontrol as expanded Network Manager

Options 2.3, 4.3 and 5.4 were discarded as politically too risky and with limited or uncertain benefits. Option 6.2 was dropped as its benefits would be only marginal compared to the baseline.

Scenario 2 seeks to secure moderate improvement, with minimal political risks, given that the most politically contentious options, such as structural separation of support services (option 1.3) and institutional separation of NSAs from the ANSPs (option 3.3) are left out. However, this excludes the possibility of applying option 5.3 (creation of more flexible FABs), as this would make sense only if ANSP services were unbundled.

Scenario 3 carries a higher risk of opposition, but has the potential to considerably improve performance by introducing more ambitious policy options and by creating synergies between the options.

### Comparison of policy scenarios

	Policy Scenario 1 Baseline scenario	Policy scenario 2: Risk-optimised	Policy scenario 3 Performance-optimised*
<b>SUMMARY OF IMPACTS</b>			
<b>Economic impacts:</b>			
Cost efficiency	0	>€250 M p.a.	>€780M p.a.
Flight efficiency	0	>€1.6 Bn p.a.	>€2 Bn p.a.
Capacity/Delays	0	>€120 M p.a.	>€150 M p.a.
Administration costs	0	€ -7.9-9.7 M p.a.	€ -13.8-16.8 M p.a.
<b>Macroeconomic impacts</b>			
GDP p.a. 2020/2030	0	~€600 M/ €700 M	~€750 M/€900 M
Employment 2030	0	~+10000	~+13000
Of which airline employment 2020/2030	0	+	~+500/+3000
<b>Social Impacts:</b>			
Employment and working conditions for workers in			
NSAs	0	+	~+80 jobs
ANSPs	0	~ -3400	~ -9400
Safety	0	+	++
<b>Environmental impacts</b>			
Noise	0	0	0
Emissions	0	++	++
<b>EFFECTIVENESS/ EFFICIENCY/ COHERENCE</b>			
Effectiveness:			

	Policy Scenario 1 Baseline scenario	Policy scenario 2: Risk-optimised	Policy scenario 3 Performance-optimised*
<i>Specific objectives:</i>			
<b>SO1:</b> Improve performance of ATS in terms of efficiency	0	++	+++
<b>SO2:</b> Improve utilisation of ATM capacity	0	+	+
<b>Efficiency, excluding macro-economic impacts</b>	0	Net benefits ~€1960 M p.a.	Net benefits ~€2915 M p.a.
<b>Coherence</b>	0	+	++

As regards **effectiveness**, the difference between the two scenarios is made narrower by the common choice of the performance scheme in option 2.2. However, in terms of **efficiency**, the small additional administration costs in scenario 3 triple the cost-efficiency gains, resulting in about 1 billion more in direct benefits than in scenario 2. In addition, both scenarios would trigger growth in the aviation sector, which should create 10 000 jobs if scenario 2 is chosen, and some 13 000 jobs if scenario 3 is chosen. As regards **coherence**, the performance-optimised scenario fits in better with the overall ideology of the performance scheme within the SES framework.

In conclusion, the performance-optimised scenario 3 is considered to be the preferred policy choice.

## 7. MONITORING AND EVALUATION

The Commission will evaluate whether the objectives of the initiative were achieved, once in 2015 and again in 2020. If they weren't, the Commission will consider which additional steps need to be taken in order to achieve them.

Performance will be monitored via the Performance Review Body's annual reports on the performance of the EU's ATM system, and via the monthly reports issued by the Network Manager. The key indicators are:

Specific objective	Monitoring indicators
SO1: Improve performance of Air Traffic Services in terms of efficiency	<ul style="list-style-type: none"> <li>• Delays (min/flight)</li> <li>• ANSP-related costs to users</li> <li>• Reduction in average flight extensions</li> <li>• Reduction in emissions</li> </ul>
SO2: Improve utilisation of air traffic management capacity	<ul style="list-style-type: none"> <li>• En-route flight efficiency</li> <li>• Improvement in runway throughput at currently capacity-constrained airports</li> </ul>