


# ATM INFORMATION DIGEST

## SEPTEMBER 2019





**Produced for the European Commission under contract:**

MOVE/E3/SER/2018-369/S12.773925

All reasonable efforts have been made to ensure the accuracy and completeness of this Digest, but neither the authors nor the European Commission accept responsibility for any of the information contained herein.

The authors welcome any comments or corrections on the content to improve its accuracy – please contact [icbsupport@askhelios.com](mailto:icbsupport@askhelios.com)

**EGHD** Expert Group on the  
Human Dimension of the  
Single European Sky

**ICB**  
Industry Consultation Body

**NCP** NSA  
Coordination  
Platform

# INTRODUCTION



# INTRODUCTION

The Air Traffic Management (ATM) Information Digest provides ICB, NCP and EGHD members with an update on the main developments within the Single European Sky (SES). The content is organised into the following Sections: EU Policy, Performance and Charging, Technology, and Safety. The ATM Information Digest is revised twice a year, and this September 2019 edition is structured as follows:

## 1 EU POLICY

- **Aviation:** A summary of global and EU aviation policy;
- **Air Traffic Management in the EU:** A summary of EU Air Traffic Management (ATM) policy;
- **Funding and Financing Modernisation in ATM:** A summary of the funding and financing opportunities within European ATM;
- **Single European Sky Awards:** A summary of the SES Awards initiative.

## 2 PERFORMANCE AND CHARGING

- **Performance and Charging Scheme:** A summary by Reference Period, the evolution of the PRB, and future charging mechanisms;
- **Functional Airspace Blocks:** A summary of the status of FABs;
- **Network Management:** An overview of the nomination of the Network Manager, update of the Network Functions Implementing Rule, network performance, and CDM processes.

## 3 TECHNOLOGY

- **SESAR Development:** An overview of the ATM Master Plan Update, including the SESAR 2020 R&I programme;
- **SESAR Deployment:** A summary of the framework to implement SESAR technologies and concepts, and its current status;
- **Interoperability:** An overview of the status of implementation of interoperability IRs and related technical issues;
- **ATM Standardisation – EASCG:** An outline of the current state and coordination of European standardisation;
- **Remotely Piloted Aircraft Systems (RPAS):** A summary of the current advancements in, and legislation surrounding, unmanned aircraft (or drones);
- **ATM Cybersecurity:** An overview of the regulatory framework for ATM cybersecurity and of the current guidance and related activities by European organisations;



## 3 TECHNOLOGY

- **Human factors:** An overview of the status of work on human factors within SESAR;
- **EU-US Collaboration in ATM Modernisation:** An outline of Federal Aviation Administration's NextGen (Next Generation Air Transportation System) and the EU's SESAR collaboration activities that aim to harmonise ATM modernisation efforts.

## 4 SAFETY

- **Common requirements for service providers and their oversight:** A summary of the subject regulation and EASA Rulemaking activity;
- **Revised EASA Basic Regulation:** An overview of the update to the EASA Basic Regulation;
- **European Plan for Aviation Safety (EPAS):** An overview of the European Plan for Aviation Safety including the EASA Rulemaking and Safety Promotion Programme;
- **EASA Annual Safety Review 2019:** An overview of the Annual Safety Review 2019.

### In addition, there are a number of supplementary annexes:

- **Useful Resources:** Provides a list of the latest documents, with their corresponding URLs, which contain information on SES policy and performance. It also includes links to access dossiers from Comitology Committees and European Commission Expert Groups;
- **Public Consultations:** Provides a list of on-going and planned public consultations related to Air Transport;
- **On-going Legislation:** Provides a list of on-going legislation related to Air Transport;
- **European Parliament Procedures:** Provides a list of legislation and reports related to Air Transport undergoing procedures in the European Parliament;
- **Status of EASA rulemaking activities:** Provides an overview of the status of EASA Rulemaking activities related to Air Transport;
- **Connecting Europe Facility:** Provides an update on the status of SESAR funding through the Connecting Europe Facility (CEF), including details on open CEF Calls;
- **SES Legislation:** Provides a list of all existing legislation relating to SES.

# 1 EU POLICY



# EU POLICY

**This section provides an overview of EU policy and legislation and provides the connection between European ATM and the global aviation community. It contains the following topics:**

- **Aviation:** A summary of global and EU aviation policy;
- **Air Traffic Management:** A summary of EU Air Traffic Management policy;
- **Funding and Financing Modernisation in ATM:** A summary of the funding and financing opportunities within European ATM;
- **Single European Sky Awards:** A summary of the SES Awards initiative.

## AVIATION

### EU TRANSPORT POLICY

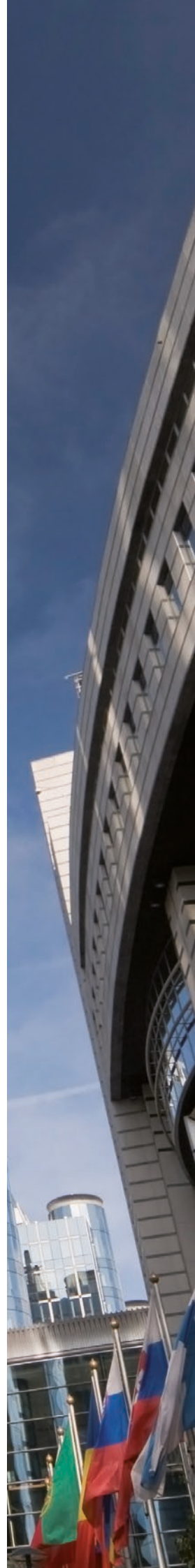
The EC's 2011 White Paper "[Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system](#)" sets the direction for EU Transport Policy.

The Commission performed a mid-term review of the paper in 2015. In July 2016 the Commission published a [Staff Working Document on the implementation of the 2011 White Paper on Transport](#), highlighting its achievements and challenges. The overarching conclusion is that there is still little progress towards the goals set in 2011 – this is attributed to the follow-up adoption of proposals by legislators, as well as the implementation being behind schedule.

### EC AVIATION STRATEGY

The Commission's [Aviation Strategy](#) was published on 7th December 2015. It is composed of a [communication](#), a [detailed supporting working document](#), a [legislative proposal to amend the EASA Basic Regulation](#) (the revised EASA Basic Regulation was adopted on 4th July 2018, see below), and Regulatory Impact Assessments for the [changes to the EASA BR and regulation of drones](#).

The Aviation Strategy lays down the Commission's vision for aviation as a whole in Europe. In ATM, the Aviation Strategy recognises that the SES initiative is an important example of an EU project that can make a difference by improving safety, raising capacity, cutting costs and minimising environmental impact, but concludes that the project is still not delivering. To this end, the Commission urges the Council and European Parliament to adopt the SES 2+ proposals (see section on SES 2+ below) and is [currently looking at whether further measures are necessary](#).



# PARLIAMENT REPORT ON AN AVIATION STRATEGY FOR EUROPE

In response to the Commission's communication on an Aviation Strategy for Europe, the European Parliament (EP) adopted MEP Pavel Telicka's [report on an Aviation Strategy for Europe](#) on 16th February 2017. The report contains proposals for aviation, which include:

- Trans-European Motorway of the Sky, relating to the concept of a European Upper Flight Information Region (EUIR), allowing continuity of air services in the event of unforeseen circumstances or disruptions of air traffic. Subsequently, the [EP invited DG MOVE to launch a pilot project](#) to produce a study on the future of European airspace architecture. Further information is provided under the 'European Airspace Architecture' sub-section below.
- Connectivity index integrating all modes of transport, in order to rationalise investment and to build a resilient transport network while improving connectivity.

## COMMUNICATION ON AVIATION

The Commission adopted its [Communication on Aviation: Open and Connected Europe](#) on 8th June 2017. This includes a Commission Staff Working Document (SWD) on practices favouring ATM Service Continuity. The SWD assesses the operational and financial impact of ATM strikes on the network, and explains operational measures adopted by Member States to mitigate the impact of strikes, highlighting the benefits these measures bring to the Network.

## EU AVIATION AGREEMENTS

Within the [Commission's Aviation Strategy](#) and with the aim of improving market access and benefiting consumers and industry, the Commission started negotiating [EU-level comprehensive agreements and aviation safety agreements](#) with several key aviation partner countries and regions in the world. Please find below the latest updates from these negotiations:

- 1 March 2011 – [EU and Brazil](#) initialled a comprehensive services agreement, having already held a horizontal agreement and a Bilateral Air Safety Agreements (BASAs);
- 2 March 2016 – EU Council authorised the Commission to open [negotiations with China and Japan](#) with the aim to establish Bilateral Air Safety Agreements (BASAs). On [20 May 2019 the European Union and China signed an agreement on civil aviation safety and a horizontal aviation agreement](#) to strengthen their aviation cooperation;
- 3 June 2016 - EU Member States authorised the Commission to [negotiate EU-level aviation agreements with four key partners](#): Qatar, the United Arab Emirates (UAE), Turkey and members of the Association of South East Asian Nations (ASEAN). With regard to [Qatar, the aviation agreement was initialled on 4 March 2019](#), the first such agreement between the EU and a partner from the Gulf region. Both parties are expected to prepare the signature of agreement following their internal procedures;
- 4 June 2006 - [European Common Aviation Area \(ECAA\) Agreement](#), a multilateral agreement was signed. This agreement [entered into force on 1 December 2017](#). The [ECAA agreement](#) is an ambitious agreement between, the European Community, its Member States, Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the former Yugoslav Republic of Macedonia, Iceland, Montenegro, Norway, Romania, Serbia, the United Nations Interim administration in Kosovo<sup>1</sup>.

<sup>1</sup>This designation is without prejudice to positions on status and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

## EU AVIATION AGREEMENTS

- 5 The Commission is also implementing, through a comprehensive air transport agreement, a [Common Aviation Area \(CAA\)](#) that envisages the gradual market opening between the EU and its neighbours that have regulatory convergence through the gradual implementation of EU aviation rules. Such agreements were concluded with the [Western Balkans](#) (the [ECAA Agreement in 2016](#), see above), [Georgia](#) and [Jordan](#) (in 2010), [Israel](#) (in June 2013), [Moldova](#) (in 2012) and [Morocco](#) (in 2006). Furthermore, an aviation agreement with [Ukraine](#) has been negotiated and it is expected to be signed in the near future. As per relations with other neighbouring countries, negotiations are on-going with [Lebanon](#), [Tunisia](#) (a comprehensive Euro-Mediterranean agreement with Tunisia was initialled on 11 December 2017) and [Azerbaijan](#) (Leaders expressed support for swift completion of negotiations on 24 November 2017).
- 6 On 29th July 2019, the Commission and Japan strengthened their aviation cooperation by concluding negotiations on an agreement on civil aviation safety that will enhance safety cooperation and facilitate market access of the EU's aeronautical sector. The agreement is a deliverable under the Commission's [Aviation Strategy for Europe](#).
- 7 On 20th May 2019, the Commission and China [signed an agreement on civil aviation safety and a horizontal aviation agreement](#) to strengthen their aviation cooperation. This marked another key deliverable under the Juncker Commission's Aviation Strategy for Europe – designed to generate growth for European business, foster innovation and let passengers' profit from safer, cleaner and cheaper flights.

For further information on the status of other EU comprehensive or horizontal aviation agreements, please consult the [Atlas Of The Sky](#)<sup>2</sup> or the [Commission's Directorate-General of Mobility and Transport website](#).

For your reference, please find below other relevant existing EU aviation comprehensive agreements:

- [EU-US Air Transport Agreement](#), (2007), amended by a [Protocol](#);
- [EU-Canada Air Transport Agreement](#) (2009).

## EASA

Regulation (EC) No 216/2008 has been repealed by [Regulation \(EU\) 2018/1139](#) (new EASA Basic Regulation). The Regulation was adopted on 4th July 2018 and entered into force on 11th September 2018 – see [Revised EASA Basic Regulation](#) for further details.

## AIR TRAFFIC MANAGEMENT IN THE EU

### ECA AUDIT OF SES

The European Court of Auditors (ECA) published [an audit of the SES](#) on 30th November 2017. The audit confirmed that the SES initiative has led to a greater culture of efficiency. However, airspace management remains fragmented and the SES has yet to be realised. The ECA made seven recommendations to the Commission with a view to making the SES more effective.

Information on the audit methodology used by the ECA can be found [here](#).

<sup>2</sup>Both horizontal and comprehensive agreements can be viewed from the menu in the Policy category.

## ECA AUDIT OF DEPLOYMENT OF SESAR

The [ECA Special Report 18/2017](#) on the SES reported on the definition and development of SESAR, the EU technical harmonisation and modernisation project in ATM. It was [announced on 24 April 2018](#) that a new audit would look at SESAR's third phase: the deployment of projects designed to modernise air traffic management, not covered under the original audit.

The auditors assessed how well the European Commission managed the deployment of SESAR and how it helped meet the objectives of the Single European Sky policy. The ECA assessed whether the EU's intervention was designed in a way appropriate to address needs and target the projects in greatest need of support, and whether it was implemented well and added value to the management of air traffic in the EU.

The conclusion, published on [Special Report No.11](#) on 25th June 2019, is that "The EU's regulation for the modernisation of air traffic management has added value, but the funding was largely unnecessary". The auditors make several recommendations on how to achieve better results. In particular, they recommend that the European Commission should:

- improve the focus of common projects and reinforce their effectiveness;
- review the EU's financial support for modernising ATM;
- review and formalise the preparation and submission of applications for funding;
- ensure appropriate monitoring of performance benefits delivered by ATM modernisation.

## SES 2+

The SES 2+ legislative proposal comprises a recast of the existing four SES Regulations and an amendment to the EASA Basic Regulation. The SES II package included a more performance-based approach to economic regulation; however, it was found to duplicate some provisions found in other pieces of legislation.

The launch of SES 2+ in June 2013 was to subsequently perform the following [updates](#):

- 1 Independence and resources of National Supervisory Authorities (NSAs)** – to provide NSAs with more support through EU-level co-operation and pooling of resources.
- 2 Support Services** – to unbundle ATM services from monopoly providers to ensure a more transparent selection of the provider that offers the best cost/benefit ratio.
- 3 Customer focus** – to provide better consultation of airspace users to ensure the needs of end-users are met.
- 4 Performance Scheme and the Performance Review Body (PRB)** – to provide more independence to the PRB.
- 5 Functional Airspace Blocks (FABs)** – to ensure FABs are more flexible, industry led, and more focused on performance.
- 6 Network Manager (NM)** – to promote a more industry-led NM and the centralisation of services.
- 7 EASA, Eurocontrol and the institutional landscape** – to divide responsibilities between the EASA, Eurocontrol and the Commission.

The legislative proposal remains blocked in the Council, pending resolution of the dispute over Gibraltar.

# REPORT OF THE WISE PERSONS GROUP ON THE FUTURE OF THE SES

Following 15 years of the SES initiative, and whilst the SES 2+ initiative is still being considered, DG MOVE commenced discussions in October 2018 on the future of SES and ATM in Europe in a Wise Persons Group (WPG). The WPG consists of 15 experts, and aimed to collectively:

- listen to the views of all major ATM stakeholder groups on the future of the SES;
- consider new information such as the Airspace Architecture Study, the Challenges of Growth report and the ECA report on SES; and
- discuss and agree recommendations in a collective report, on the direction that ATM in Europe should take, making use of existing tools and instruments, or proposing new ones.

The WPG met for the first time in October 2018. Following hearings with ANSPs and Airspace Users, airports and Professional Staff Organisations, the WPG met three times between January and March 2019. The [Report of the Wise Persons Group](#) was published in April 2019, containing ten recommendations to enable additional ATM capacity in Europe.

The Commission together with the Finnish Presidency are organising [a High Level Conference](#) on 11-12th September 2019 in Brussels. The conference aims to encourage:

- the reform of the Single European Sky;
- consider the latest trends and developments in the context of ongoing and future digitalization; and
- stimulate exchange of views between high-level representatives from the aviation sector on how to ensure that a safe, sustainable European ATM system delivers efficiently capacity that responds more flexibly to demand.

The event will bring together stakeholders, civil society, businesses, decision-makers and representatives from European institutions, to share their view on aviation and SES related issues.



## EUROPEAN AIRSPACE ARCHITECTURE

Following the [Commission's Aviation Strategy](#) report on 7th December 2015, MEP Pavel Telicka's [report on an Aviation Strategy for Europe](#) (published 16th February 2017) linked the question of air traffic service continuity to the European Upper Information Region (EUIR).

Subsequently, MEP Marian-Jean Marinescu requested the Commission to carry out a pilot project on [European Airspace Architecture](#), earmarking €800,000 for the study. The SESAR Joint Undertaking (SJU) was tasked, with the support of the Network Manager, to deliver the study, which aimed at [proposing a new architecture for European airspace](#).

The [first public workshop](#) was held on 5th–6th July 2018 to gain early stakeholder input. Prior to the [second workshop on 20th-21st November 2018](#), [pre-read material](#) was released to provide a snapshot of the SJU's work to date. A [summary](#) of the second workshop was published.

A [proposal for the future architecture of the European airspace](#) was published on 5th March 2019, which defined how Europe's airspace architecture should look in the medium to long term (2025-2035) and the practical steps needed to make it a reality.

Results of the Airspace Architecture Study have been integrated in the draft ATM Master Plan and following stakeholders and Wise Persons Group support for the study, the European Commission has requested the SJU to develop, in close cooperation with the Network Manager and EUROCONTROL, a transition plan for the operational and technical dimensions of the AAS. The outcome of this work will be delivered in the form of a report to the Commission on 1st September 2019 and will be presented at a SES high-level event conference on 12th September 2019.

## MARKETABLE TANS

The EU published a '[Support study to the evaluation of cost allocation to marketable terminal air navigation services](#)' in June 2019 to better understand the transition towards market-based provision of Terminal Air Navigation Services (TANS). It is intended to further inform the progression of liberalisation in air navigation services, a step already taken in the UK, Germany, Sweden, Spain, Norway and Switzerland.

# FUNDING AND FINANCING MODERNISATION IN ATM

## IMPLEMENTATION OF THE TEN-T

The implementation of the Trans-European Transport Network (TEN-T) is facilitated by CEF funds for the period 2014-2020 and was previously supported through TEN-T funds (2007-2013). SES and SESAR are recognised within CEF as 'horizontal projects'

The Innovation and Networks Executive Agency (INEA) is responsible for managing parts of the CEF and Horizon 2020 programme (with the exception of ATM research, which is managed by the SJU). INEA also manages the remaining TEN-T projects.

## CONNECTING EUROPE FACILITY (CEF)

The CEF is an integrated financial instrument for investing in EU infrastructure relating to Trans-European Network projects covering transport, energy and telecommunications. It is the common focal point for network-related projects and coordinated funding for the EU financial period (2014-2020). The CEF regulation was published on 20th December 2013. According to the ATM Master Plan, the target concept for SESAR deployment is expected to require an investment of between €18 billion and €26 billion by 2035. Further information can be found in the SESAR Deployment section.

The total budget of the CEF funding earmarked for transport-related projects between 2014 and 2020 is over €24.05 billion, of which €11.3 billion will be transferred from the Cohesion Fund. Approximately €3 billion is allocated for SES-SESAR implementation up to 2020, including €1.5 billion in the form of grants from the general envelope; €500 million in the form of grants from the Cohesion envelope; and €500 million in the form of financial instruments.

CEF funding rates of eligible costs (as a percentage of the overall cost of the project) are 50% for studies and implementation of infrastructure; 50% for ground equipment; and 20% for airborne equipment.

The CEF Multi-Annual Work Programme (Commission Implementing Decision C(2014)1921 and its annex) was adopted on 26th March 2014 for financial assistance in the field of the Connecting Europe Facility - transport sector for the period 2014-2020. INEA has launched three related Calls for Proposals: 2014, 2015, 2016, 2017, 2018 and 2019. Links to the results of these CEF Transport Calls can be found in the Connecting Europe Facility (CEF) section in the Annex.

The 2017 CEF Transport SESAR call for proposals was launched on 6th October 2017, with EU funding of €290 million made available exclusively for proposals addressing the priority 'Single European Sky – SESAR of the 2017'; provisionally, 80% was allocated to 'Common Projects' and 20% to 'Other Projects'.

A total of 33 proposals were received by INEA in response to the 2017 CEF Transport SESAR call. All proposals were deemed admissible, but only 28 of them were declared eligible. The total requested funding of the eligible proposals was more than €400 million – covering both PCP and non-PCP projects – 1.38 times the available indicative budget.

### The evaluation and selection process were carried out in two steps:

- 1 External evaluation:** An external evaluation organised by INEA, assessing each proposal against four award criteria (relevance, maturity, impact and quality) was conducted. The external validation led to 19 recommended proposals totalling €360.7 million.
- 2 Internal evaluation:** An internal evaluation panel, chaired by the Directorate-General for Mobility and Transport, reviewed each case on the basis of the policy-related criteria mentioned in the 'final selection process' section of the call text. As per their report, 14 proposals were recommended for CEF co-funding, with a budget of €290.26 million.

Commission Implementing Decision C (2018) 6705 establishing the list of proposals selected for EU financial assistance under CEF was released on 16th October 2018. As per the Decision Annex, the Commission approved all recommended projects, having deemed them all to have met the required criteria; the estimated total eligible costs of the actions, the percentage of the financial assistance out of the estimated total eligible costs and the respective maximum amounts of the financial assistance, were approved.

One of the approved proposals was a consolidated SESAR Deployment Manager bid, integrating 55 PCP projects in a single application. It represented an overall investment of €592 million and a request for CEF funding of €275 million. €232.2 million of funding was awarded to the proposal.

The overall results of the CEF Calls are summarised in the following table:

Call	Indicative ATM Funding Value (pre-decision)	Funding received for PCP Projects	Funding received for non-PCP Projects	Decision
2014	€300 M	€325 M	€50 M	<a href="#">2014 Decision</a>
2015 (General)	€515 M	€473 M (value of funding applied for: €1 076 M)	€123 M (value of funding applied for: €140 M)	<a href="#">2015 Decision</a>
2015 (Cohesion)	€300 M	€59 M (value of funding applied for: €112 M)	€39 M (value of funding applied for: €40 M)	<a href="#">2015 Decision</a>
2016 (General)	€300 M	€275 M (value of funding applied for: €240 M)	€25 M (value of funding applied for: €60 M)	<a href="#">2016 Decision</a>
2016 (Cohesion)	€100 M	€8.6 M (value of funding applied for: €80 M)	€3.0 M (value of funding applied for: €20 M)	<a href="#">2016 Decision</a>
2017 (SESAR)	€290 M	€232.2 M (value of funding applied for: €275 M)	€58. M (value of funding applied for: €116.2 M)	<a href="#">2017 Decision</a>

**Table 1: Summary of the 2014, 2015 and 2016, 2017 Calls for Proposals**

Neither the 2018 nor 2019 CEF calls included calls for proposals for aviation.

An information [note from the European Commission](#) published in December 2018 sets the way forward for the CEF Transport programme. In this note, the implementation end date for the current CEF Transport programme, 2014-2020, is set as 31st December 2023, to limit the overlap with the successor programme, CEF 2, starting on 1st January 2021. Grant Agreements may be amended to extend their duration for no more than 24 months from their initial set date at the time when first signed, exceptional and duly justified cases can obtain up to an additional period of 12 months. Grant amounts that beneficiaries are not in a position to consume will be reinjected into the programme.

This note also clarifies CEF reflow calls and the first CEF 2 calls, summarised in the following table:

Call	Budget envelope	Work programmes at CEF Committee	Launch/closure of the call for proposals	Time to grant
Reflow 1	General	September 2019	Q4-19 to Q2-20	End 2020
	Cohesion	September 2019	Q4-19 to Q2-20	End 2020
Reflow 2	General	September 2020	Q4-20 to Q1-21	End 2021
	Cohesion	September 2020	Q4-20 to Q1-21	End 2021
CEF 2 First call	General	September 2020	tbc	tbc
	Cohesion	September 2020	tbc	tbc

**Table 2: CEF reflow calls and the first CEF 2 calls**

# PRIVATE FINANCING

## CEF Blending call

The [2017 CEF Transport Blending MAP Call for Proposals](#) opened on 8th February 2017 under the Multi-Annual Work Programme. €1 billion was made available for projects of common interest in the transport sector, reserving [€40 million](#) specifically for the SES through SESAR. Two proposals were submitted under the SESAR.

In March 2019 the European Commission together with the European Investment bank launched the [CEF Transport Blending Facility](#), this aims to financially support projects contributing to sustainability and efficiency in the transport sector in Europe. The initial budget is €200 million, and a priority is alternative fuels. A rolling call for proposals will be published in June/July 2019 with quarterly cut off dates until March 2021.

## European Fund for Strategic Investment (EFSI)

The [EFSI Regulation](#) was adopted in June 2015, establishing the EFSI, and aiming to mobilise funding for projects of at least €315 billion to help promote growth and employment in the period 2015-2018. This goal was surpassed with [€424 billion investment mobilised](#).

On [13th September 2017](#), the European Parliament and Member States agreed to extend EFSI's initial three-year timeline to 2020, EFSI 2.0, and to increase the proposed target investment from €315 billion to at least €500 billion.

## European Investment Bank (EIB)

The EIB has a range of standard financial products available to support SESAR deployment. It is possible to accumulate CEF funding and EIB loans, up to a limit of 70% of the total project cost. For Cohesion States, this rises to 90%.

On 13th January 2016, the EIB and the SESAR Deployment Manager (SDM) signed a [Memorandum of Understanding](#) (MoU) formalising the way in which the parties will work together. Their aim is to ensure a range of financial instruments and mechanisms are available to industry stakeholders to support the implementation of the SESAR Deployment Programme. The financial products offered by EIB have been detailed [here](#).



# SINGLE EUROPEAN SKY AWARDS

The European Commission Directorate General for Mobility and Transport (DG MOVE) launched the Single European Sky Awards in 2016 to reward, encourage and give visibility to those who have excelled in contributing to the achievement of the Single Sky initiative. [The 2016 winners](#) included COOPANS Alliance, Heathrow Airport, The BOREALIS Alliance, LFV Sweden Remote Tower Service and the Spanish Member State for Implementing a bold reform to boost national ATM performance. The [2017 winners](#) included the Augmented Approaches to Land initiative, the RNP Implementation Synchronised in Europe (RISE) project, the Irish Aviation Authority for its work on Multiple Remote Tower Operations, South-East Axis Free Route Airspace (SEAFRA) and Skyguide's Transition to a Service Oriented Architecture.

In 2018 this event was not organised but was relaunched in 2019. The [2019 Single European Sky \(SES\) Awards](#) took place in March at the World ATM Congress, presented by the Director-General of the European Commission's DG Mobility and Transport, Henrik Hololei. This edition of the contest had the [following winners](#) for each five award categories:

## 1 Network Performance Improvement

**The South East Common Sky Initiative Free Route Airspace**, for extending the application of Free Route Airspace and contributing to increased network performance.

**Eurocontrol Network Manager 4ACC** for introducing a new approach to managing air traffic flows, allowing for the shifting of traffic during very busy periods.

## 2 Innovation

**Interoperability with the Eurocontrol Network Manager**: an eleven-partner initiative that promotes digitalisation in ATM, supporting interoperability between the Network Manager and its operational stakeholders.

## 3 Sustainability

There were no submissions for the Sustainability award.

## 4 Cooperation

**Synchronised stakeholder decision on process optimisation at airport level**: a project involving 14 ATM/airport organisations across Europe, cooperating to improve performance and predictability through initial Airport Operations Plans.

## 5 Single European Sky Excellence

**Professional Staff**: for complete commitment from staff to delivering the essential services needed to enable capacity and deliver safety. Nominated by the ICB.

# 2 PERFORMANCE



# PERFORMANCE

**This section provides an overview of performance within European ATM, covering the following topics:**

- **Performance and Charging Schemes:** A summary by Reference Period of Network Performance and developments from the various actors;
- **Functional Airspace Blocks:** A summary of the status of FABs;
- **Network Management:** An overview of the nomination of the NM, update of the Network Functions Implementing Rule, network performance, and CDM processes.

## PERFORMANCE AND CHARGING SCHEMES

The SES Performance and Charging Schemes are organised around fixed Reference Periods (RPs), for which legally binding performance targets on ANSPs are set at EU, FAB, charging zone and/or national level.

The Commission adopted the [Performance and Charging scheme Implementing Regulation for RP3](#), that will commence at the beginning of 2020, on 11th February 2019. EU-wide targets have since been adopted and the development of Member State or FAB-level RP3 performance plans are currently underway. Further information on this can be found in the “Preparations for Reference Period 3” below.

The Performance and Charging Schemes were included under the scope of the ECA's audit of the SES (covered under [Air Traffic Management in the EU](#) within the [EU Policy](#) Section). The [outcome](#) was released on 1st December 2017.

## REFERENCE PERIOD 2 (2015-2019)

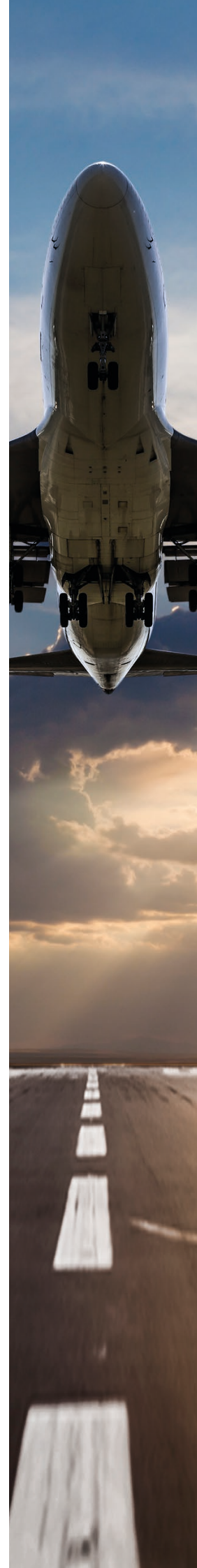
### Targets

The Performance Scheme (([EU](#)) No 390/2013) and Charging Scheme (([EU](#)) No 391/2013) Regulations for RP2 (2015–2019) were adopted in May 2013. An ad-hoc meeting of the SSC on 4th February 2014 adopted [Union-wide targets for RP2](#).

Following the review and subsequent revision of FABEC, Switzerland and BlueMed's initial performance plans, FABEC and Switzerland's have had their revised plans accepted. Decisions on the revision of cost-efficiency targets for Bulgaria, Malta and Poland ([Decision \(EU\) 2017/2376](#)) were adopted in 2017.

Decisions on the revision of cost-efficiency targets for Portugal and Romania were adopted in 2018 ([Decisions \(EU\) 2018/1782](#) and [\(EU\) 2018/2021](#)).

The Decision on the consistency of the revised local capacity targets with the Union-wide targets contained in BlueMed FAB's performance plan was adopted in May 2019.



## RP2 unit rates – 2019

The [2019 unit rates](#) were released by Eurocontrol on 29th November 2018 following the 111th Session of the Enlarged Committee for Route Charges on 21st -22nd November. Route charges decreased by 1.6% to €7.2 Billion, whilst average forecasted inflation was 2.2%. An overall increase in service units of 4.8% to 154 million was forecasted; consequently, the average unit rate decreased by 6.1% to €46.75.

On 8th May 2018, the Commission published an [Implementing Decision \(\(EU\) 2018/704\) on the compliance of unit rates](#) for various charging zones. The Commission found that the unit rates for various en route charging zones for 2018 were compliant with Implementing Regulations (EU) No 390/2013 and (EU) No 391/2013.

On 30th July 2019, the Commission published an Implementing Decision [\(EU\) 2019/1291](#) on the compliance of the 2019 unit rate for the charging zone of Switzerland. The 2019-unit rate for the en route charging zone of Switzerland was compliant with Implementing Regulations (EU) No 390/2013 and (EU) No 391/2013.

## PRB Annual Monitoring

The PRB annual RP2 Monitoring Report for 2017 was published in November 2018 on the [ESSKY Portal](#)<sup>3</sup> and is available in three volumes: [European Overview](#), [Local Overview](#), and [Safety](#). The report is based on monitoring reports submitted by the NSAs, the NM and EASA, subject to the provisions of the Performance and Charging Regulations.

The 2017 PRB Annual RP2 Monitoring Report and recommendations were presented at SSC/70 in November 2018.

The PRB is currently developing the Annual Monitoring Report for 2018 – this is due to be presented at SSC/73 on 26th-27th November 2019.

# PREPARATIONS FOR REFERENCE PERIOD 3 (2020-2024)

## Targets

The Performance and Charging Scheme Implementing Regulation ([\(EU\) 2019/317](#)) for RP3 (2020-2024) was adopted in February 2019. The Implementing Decision ([\(EU\) 2019/903](#)) for Union-wide targets for RP3 was adopted on 29th May 2019. The Union-wide targets for RP3 are as follows:

### Safety

- At least Level C in the safety management objectives ‘safety culture’, ‘safety policy and objectives’, ‘safety assurance’, and ‘safety promotion’;
- At least Level D in the safety management objective ‘safety risk management’.

### Environment

- An average horizontal en-route flight efficiency of the actual trajectory measured as average additional distance flown compared to the great circle distance. Actual values shall not exceed the following percentages: 2.53% in 2020, 2.47% in 2021, 2.40% in 2022-2024.

### Capacity

- An average en-route ATFM delay attributable to air navigation services. A maximum of 0.9 minutes per flight in 2020 and 2021, 0.7 minutes per flight in 2022, 0.5 minutes per flight in 2023 and 2024.

### Cost-efficiency

- A year-on-year change of the average Union-wide determined unit cost for en-route air navigation services. –1.9% annual reduction over RP3.

<sup>3</sup>To access the documents, you must have an EU Login Account. A Login Account can be created at the following [link](#).

## RP3 unit rates – 2020

In accordance with Article 29(2) of the RP3 Performance and Charging Implementing Regulation, Member States are required to submit their calculated unit rate for 2020 to the EC and the CRCO by 1st June 2019. These unit rates may be updated before 1st November 2019.

## RP3 preparations timeline

Following the positive vote on the RP3 Performance and Charging Implementing Regulation, the timeline for the development of local targets, performance plans and the submission of unit rates is indicated below. It should be noted that the dates for the submission of local performance plans and targets are based on the new regulatory provisions for RP3. The timeline for the development of the RP3 Performance and Charging Regulation is indicated below. It should be noted that the dates for adoption of Union-wide targets, and the submission of local performance plans and targets are based on the new regulatory provisions for RP3.

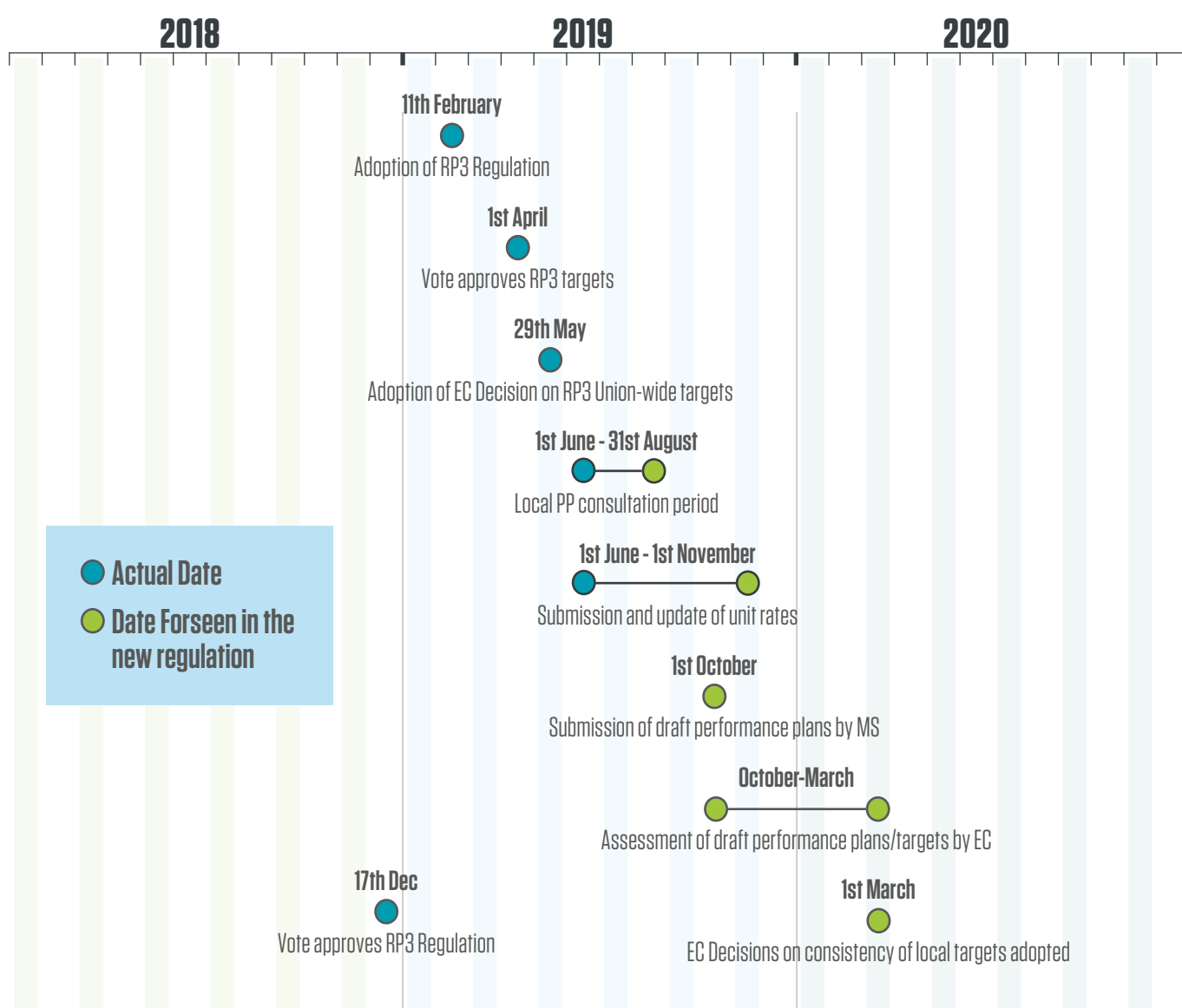


Figure 1: Timeline for Reference Period 3 Implementation and Execution

As shown in the diagram on the previous page, an EC Decision on the consistency of local targets will be adopted at the latest by 1st March 2020:

- For States whose performance plans are deemed consistent, the EC will notify the state on its decision within 5 months of receiving the draft performance plan. The Member State shall then publish and adopt this performance plan<sup>4</sup>.
- For States or FABs whose performance plans are deemed inconsistent, a revised plan is to be submitted to the EC by 1st June 2020; an EC Decision on the consistency of the revised targets will be adopted by 1st October 2020. If the revised targets are deemed consistent, adoption and publication of the performance plan by the Member State or FAB shall be completed by November 2020. If any of the revised targets are still deemed inconsistent, a detailed examination of the targets for which doubts remain will then be performed.

## PERFORMANCE REVIEW BODY (PRB)

[Commission Implementing Decision \(EU\) 2016/2296](#) of 16th December 2016 sets up the group of experts designated as the PRB of the SES. The PRB assists the EC in regulating ANSPs by providing independent advice to improve the performance of ANS across the four KPAs.

The tasks of the PRB are set out in Article 3 of the RP3 Performance and Charging Implementing Regulation. The current group of PRB members is chaired by Ms Regula Dettling-Ott. According to Decision (EU) 2016/2296, no more than two thirds of PRB members can be renewed at the same time. Following a call for application, three new members have been appointed as of 1st September 2019.

## RESOURCES

The following are relevant Commission websites related to SES performance:

- [SES Performance section on the DG MOVE website](#) (public access)
  - High-level public information and performance related studies issued by the Commission
- [SES Performance website](#) (upon registration)
  - Access to SES performance regulatory framework
  - Public library containing PRB reports
  - Information on all SES performance-related events
  - Useful materials for RP3 (including supporting material)
- [ESSKY](#) (Accounts created on request; access rights are managed by the European Commission, and have been pre-registered for NSAs/Member States)
  - Submissions of reports by Member States and NSAs
  - Data Repository of all non-public documents to be shared by the bodies involved in the implementation of the SES performance and charging schemes

<sup>4</sup>Article 14 of the [Performance and Charging Implementing Regulation](#)

# FUNCTIONAL AIRSPACE BLOCKS (FABS)

## OVERVIEW

Functional Airspace Blocks (FABs) were defined in [Regulation \(EC\) No. 1070/2009](#) and amended in [Regulation \(EC\) No. 549/2004](#).

In 2016, the Commission contracted a study on FABs to assess their organisational, operational and technical progress. The [full report](#) was approved by the Commission, following amendments, on 22nd February 2017, and delivered to Member States on 27th April 2017.

In December 2017, the European Court of Auditors released a [Special Report](#) on the SES (see [Air Traffic Management in the EU](#)). The Report concluded that FABs have ‘fostered cooperation structures, not defragmentation’ and currently ‘provide a forum for cooperation between stakeholders of neighbouring States but have proved ineffective in targeting fragmentation’. The Report subsequently recommended that the Commission should, by 2020, assess the added value of maintaining the regulatory requirements for FABs and explore other policy options targeting defragmentation.

In order to tackle defragmentation, the EC has held bilateral meetings with FABs to:

- review the existing FAB arrangements (institutional and operational) and resulting FABs’ contribution to the capacity and efficiency of the ATM network;
- receive FABs’ views on prospects for 2019 and beyond (RP3);
- inform FABs about EU initiatives aimed at enhancing the ATM network performance.

The EC has held seven meetings with FABs:

- Jul 2018: FAB CE
- Dec 2018: BLUE MED, BALTIC FAB, DK-SE FAB, DANUBE FAB;
- Jan 2019: SOUTHWEST FAB, NEFAB

The EC is still to hold meetings with FABEC and UK-IRE FAB. With the information gathered at these above bilateral meetings, the EC has begun compiling a document on the ‘Considerations on the possible evolution of FABs’ and aim to release this report by the end of 2019. This document will form part of a set of ‘reflexion documents’ (including the Airspace Architecture Study and Wise Persons Group report) on the future evolution of the SES.

## NETWORK MANAGEMENT

### REGULATORY CONTEXT

The Network Functions Implementing Regulation (NF IR) [\(EU\) No 677/2011](#), adopted on 7th July 2011, laid down guidelines for the implementation of ATM network functions. A revised [Network Functions Implementing Regulation](#) received a positive vote at SSC/70 on 27th November 2018, and was subsequently adopted by the Commission on 24th January 2019, with [\(EU\) 2019/123](#) repealing [\(EU\) No 677/2011](#).

# REGULATORY CONTEXT

## Designation of the NM

[Commission Decision C \(2011\)4130](#) designated Eurocontrol as the NM until 31st December 2019 (the end of RP2), assigning it the responsibility to perform the network functions defined in the NF IR.

After a positive vote at [SSC/71](#), Eurocontrol was [reappointed as the NM](#) to cover RP3 and RP4 by Commission Implementing Decision (EU) [2019/709](#) of 6 May 2019. The Network Manager shall perform its tasks in accordance with the requirements laid down in Article 7 of Implementing Regulation [\(EU\) 2019/123](#).

## Appointment of new NM Director

The process for appointing the new Director of the NM has been completed. Mr Iacopo Prissinotti has assumed the role of Director Network Management, replacing Mr Joe Sultana.

# PREPARATIONS FOR RP3 NETWORK PERFORMANCE PLAN

As part of (EU) 2019/123 (NF IR), the NM shall draw up the Network Performance Plan describing the value added of the NM in support to the activities of MS, FABs, ANSPs and civil and military AUs towards achieving the capacity and environment targets, and set out the contribution of the network functions towards achieving the Union-wide performance targets.

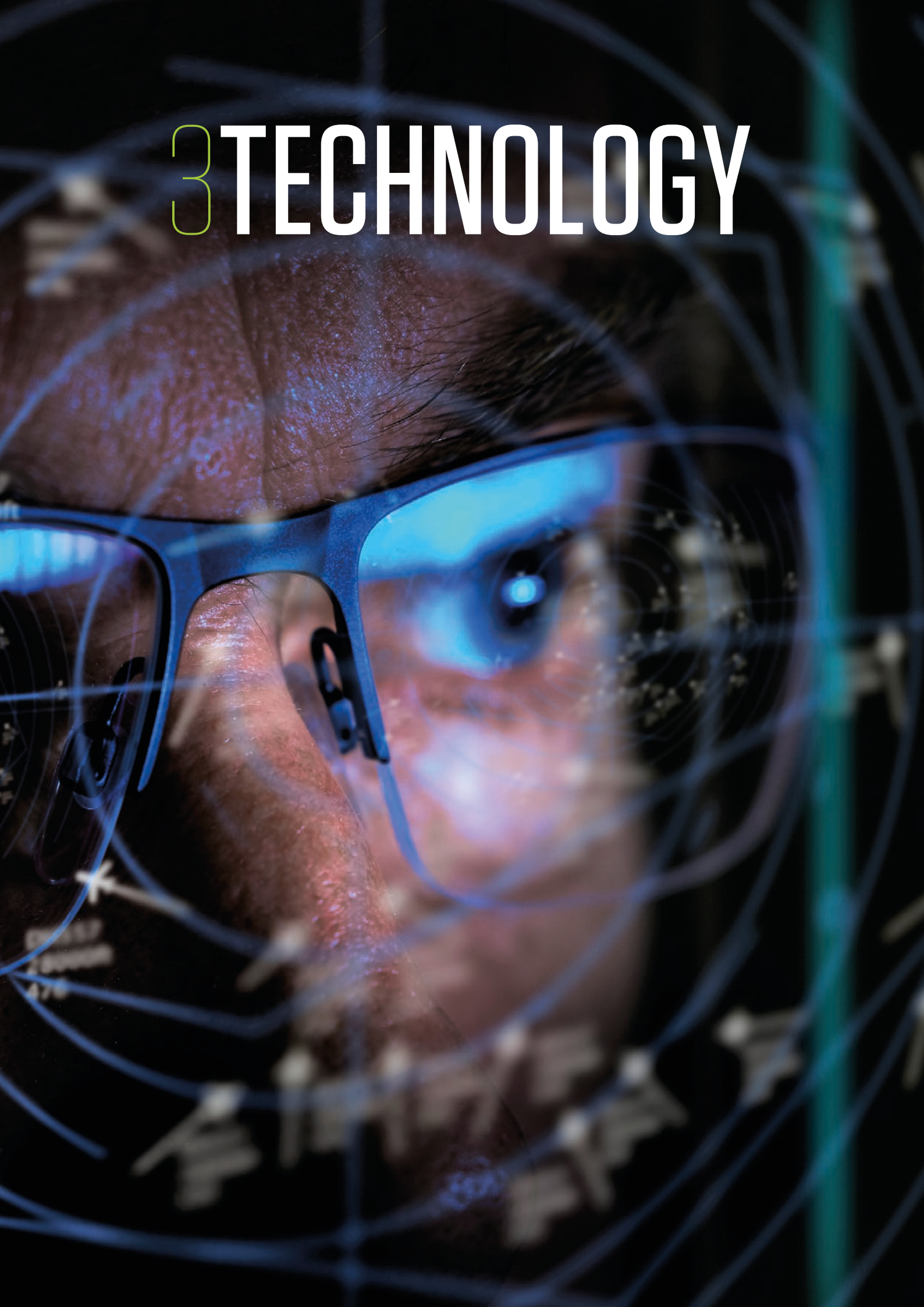
The plan shall also set out performance targets and objectives for the NM, for each network function, and the measures aimed at achieving those targets. The NM is required to submit the draft Network Performance Plan to the EC at the latest three months before the start of the reference period.

# SUMMARY OF NETWORK PERFORMANCE (2018)

The [Network Manager Annual Report 2018](#) was published in August 2019. The Network Management Board (NMB) adopted the [2018 NM annual network operations report](#) in March 2019. This report gives an overview of the yearly activities performed in the context of the Network Performance Plan (NPP). The key findings across the network in 2018 were as follows:

- Network traffic increased by 3.8% and reached an all-time record of 11 million flights. Traffic growth was particularly high in the south-east axis, with ACCs in Central and Eastern Europe having record traffic levels. The busiest day was 7th September with 37,088 flights.
- Airlines reported a delay (all causes) of 14.7 minutes per flight, an increase of 19% compared to 2017.
- The en-route ATFM delay was 1.73 min/flight, double the delay of 2017 (0.88 min/fit in 2017) and well above the 0.5 minutes per flight target. High levels of demand, a major drop in capacity at two centres in the core area (Karlsruhe UAC and Marseille AAC) and a record number of adverse weather events and industrial actions severely disrupted the network in 2018.
- The airport ATFM delay was 0.60 minutes per flight, a 3% decrease compared to 2017. Weather and capacity accounted for 78% of the total airport delays in 2018.
- ATC capacity, en-route weather and ATC staffing were the main causes of en-route ATFM delay. Weather and staffing more than doubled compared to 2017.
- NM and affected ANSPs prepared for the anticipated capacity issues well ahead of summer. The 4ACC initiative implemented a large set of measures aimed at diverting demand from risk areas.
- NM delivered en-route ATFM delay savings of 12.5% (2.7 million minutes) through re-routing proposals or direct actions from the NMOC.
- The flight plan indicator (KEP) improved again in 2018, but at a slower rate than in 2017. The actual trajectory indicator (KEA) almost reached the 2.78% target (NM and SES) during spring 2018. However, KEA deteriorated significantly afterwards due to capacity, weather and industrial reasons.

# 3 TECHNOLOGY



# TECHNOLOGY

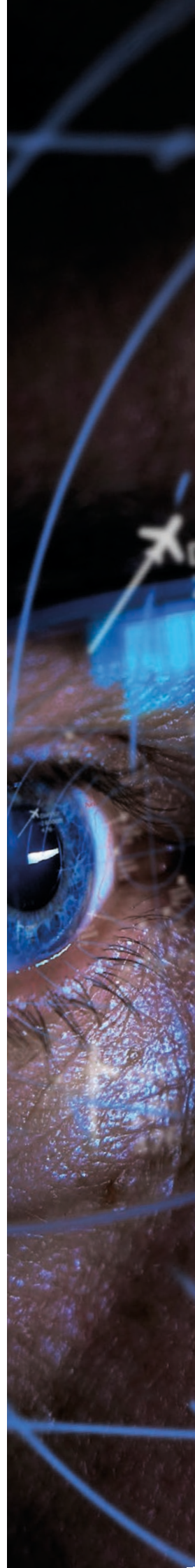
**This section provides an overview of developments in European ATM technology, covering the following topics:**

- **SESAR Development:** An overview of the ATM Master Plan Update, including the SESAR 2020 R&I programme;
- **SESAR Deployment:** A summary of the framework to implement SESAR technologies and concepts, and its current status;
- **Interoperability:** An overview of the status of implementation of interoperability IRs and related technical issues;
- **ATM Standardisation – EASCG:** An outline of the current state and coordination of European standardisation;
- **Remotely Piloted Aircraft Systems (RPAS):** A summary of the current advances in, and legislation surrounding, unmanned aircraft (or drones);
- **ATM Cybersecurity:** An overview of the regulatory framework for ATM cybersecurity and the current guidance and related activities by European organisations;
- **Human factors:** An overview of the status of work on Human Factors within SESAR; and
- **EU-US Collaboration in ATM Modernisation:** an outline of Federal Aviation Administration's NextGen (Next Generation Air Transportation System) and the EU's SESAR collaboration activities that aim to harmonise ATM modernisation efforts.

## SESAR DEVELOPMENT

### ACARE

In response to the [Flightpath 2050 vision](#), the Advisory Council for Aviation Research and innovation in Europe (ACARE) produced a [Strategic Research and Innovation Agenda \(SRIA\)](#) in 2012, alongside the establishment of new research programmes including Horizon 2020. The [2017 update of the SRIA](#) provides a comprehensive roadmap to deliver the goals of Flightpath 2050.



## HORIZON 2020

[H2020](#) is the largest EU Research and Innovation Programme, with almost €80 billion of funding available from 2014 – 2020. It is the financial instrument implementing the [Innovation Union](#), a [Europe 2020](#) flagship initiative aimed at securing Europe's global competitiveness.

H2020 brings together all existing Union R&I funding, including the Framework Programme for Research, the innovation-related activities of the Competitiveness and Innovation Framework Programme, and the European Institute of Innovation and Technology.

The Horizon 2020 Framework Programme for Research and Innovation (2014–2020) was formally adopted by [EC 2013/743](#) on 11th December 2013. [An updated version of the Horizon 2020 Work Programme for 2018–2020](#) was published on 24th July 2018, with an anticipated €30 billion in funding being released from the €80 billion available.

## SES ATM MASTER PLAN UPDATE

The 2015 version of the [European Air Traffic Management Master Plan](#) (ATM Master Plan) was approved by the SJU Administrative Board on 15th December 2015. The plan forms the basis of the SJU's SESAR 2020 Research and Innovation Programme and serves as a means of identifying essential ATM functionalities.

Having been [launched in Tallinn](#) on 8th November 2017, the SJU has formally delivered the updated EU ATM Master Plan to the European Commission. It is expected to be published in 2019.

An Implementation Plan is revised every year as part of the 'Implementation view' (Level 3) of the EU ATM Master Plan. The [2019 Edition](#) brings together elements in SESAR which have reached the necessary operational and technical maturity. The document aims to detail a full view of the overall lifecycle of the SESAR solutions and the outcomes of the SESAR 1 programme.

A [drone addendum](#) to the 2015 ATM Master Plan was published on the 21st March 2018. Drones and U-Space will be further addressed in the 2019 ATM Master Plan and are described in a later section.

## SESAR 1 (2007-2016)

### SESAR Releases

Since 2011, the SJU has completed 68 validation exercises, identifying mature solutions which have been put forward for industrialisation and subsequent deployment. The results of the most recent validation exercises can be found in [Release 5](#) (2015). The [SESAR Solutions Catalogue](#) draws together 63 SESAR Solutions delivered by SJU members and partners.

### Final evaluation of the SESAR JU operating under SESAR 1

As required by Article 7 of the [Council Regulation \(EC\) No 219/2007](#), amended by [Regulation \(EU\) No 721/2014](#), a [final evaluation of the SESAR Joint Undertaking \(SJU\) in executing the SESAR 1 programme from 2007 to 2016](#) was published in October 2017.

## SESAR 2020 (2016-2024)

On 16th June 2014, the Council of Ministers of the European Union adopted [Regulation \(EU\) No 721/2014](#), amending [Regulation \(EC\) No 219/2007](#), extending the duration of the SESAR Joint Undertaking from 31st December 2016 to 31st December 2024. The amendment also entrusted the SJU with €585 million from the Horizon 2020 Framework Programme ([Regulation \(EU\) 1291/2013](#)) to execute and deliver the SESAR R&I Programme 2020 ('SESAR 2020').

**SESAR 2020 is based on the [ATM Master Plan](#) and is split into three research phases:**

- 1 Exploratory Research (€85 million from Horizon 2020);
- 2 Industrial Research and Validation (€1.2 billion from the SESAR JU partnership); and
- 3 Very Large-Scale Demonstrations (VLDs) (€300 million from the SESAR JU partnership).

The SJU's [Single Programming Document for 2019-2021](#) outlines the ongoing roadmap for the implementation of SESAR 2020 and of the other SJU missions over the next three years.

The total funding of €1.5 billion for Phase 2 and Phase 3 is comprised of €500 million each from Horizon 2020 (H2020), Eurocontrol and industry members.

### SESAR 2020 Call for Proposals

**SESAR 2020 Projects are in two waves:**

- 1 Wave 1 (2016–2019); and
- 2 Wave 2 (2019–2021)

#### Wave 1 Calls

[Wave 1 of the Call for Proposals](#) was published by the SJU in October 2015 and covered Exploratory Research (ER) and VLDs for the period 2016-2019. The objective of the SESAR 2020 Exploratory Research (ER) Programme is to address the known, yet unsolved, problems across the ATM Research domain. Wave 1 had an overall budget of €85 million of EU funding for SJU members and has now closed.

The Call brought together the results from SESAR 1 requiring further research, as well as new research content aligned with the European ATM Master Plan. [Contracts were signed for 20 projects](#) in Q4 2016, totalling €246.5 million in expenditure. The table below provides an overview of the Call for Proposals concluded since the launch of the Programme.

Call for proposal	Launch date	Date of closure	EU Funding and results
First <a href="#">Call for proposals</a> for SESAR 2020 ER projects, under the umbrella of the Horizon 2020 Research Framework Programme	Mar 2015	Jun 2015	<a href="#">28 projects were selected for €20.4 million of EU funding</a> , which will run until 2018.
<a href="#">Exploratory Research call - RPAS (Remotely Piloted Aircraft Systems)</a>	Jun 2016	Nov 2016	A total of €8.3 million was awarded to nine projects, all of which have started. The nine new projects represent 43 beneficiaries across Europe.
<a href="#">SESAR 2020 ER projects and VLD activities</a>	Dec 2016	May 2017	Budget of €28 million. 35 of the 63 projects submitted were evaluated to be 'above threshold'.
<a href="#">Call for Proposals for VLD Geofencing</a>	Sept 2017	Nov 2017	Total budget earmarked for the co-financing of projects was estimated at €0.5 million.

**Table 3 - Calls for proposals under SESAR 2020 Wave 1**

In addition, on 7th May 2018, SJU launched [a call for contributions to the 8th SESAR Innovation Days](#), which took place at the University of Salzburg on 3rd – 7th December 2018. During this event, the SJU presented a [progress update and shared results, of its exploratory research programme](#).

## Wave 2 Calls

On 23rd April 2019, the SJU launched a restricted IR Wave 2 call for proposals (reference H2020-SESAR-2019-1 and covers VLD activities). The Wave 2 call will cover the period from 2019 to 2022.

### The objectives of the Wave 2 call are to provide:

- flexibility to align future research with the results of Wave 1;
- re-assess priorities and ensure value-for-money for the EU and delivery against SES goals;
- complete candidate SESAR Solutions which were not planned to be delivered to V3 maturity level within Wave 1; and
- allow for strategic input to scope new projects from the Master Plan update and to build on results of the outcome of ER projects from the ER1 call for proposals.

The total available funding for the Wave 2 call is EUR 151.5 million, covering both IR and VLD activities, with an indicative amount of EUR 131 million for IR.

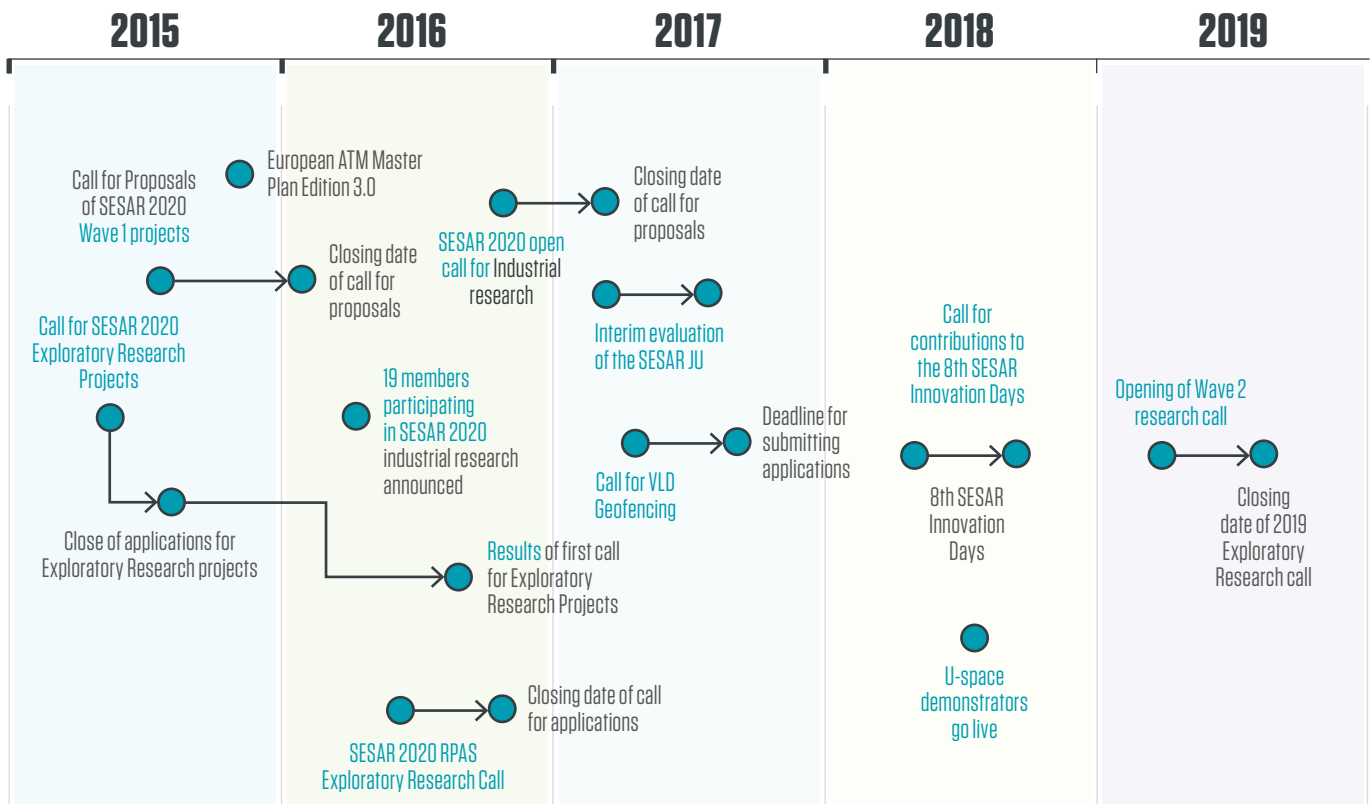


## Exploratory Research (ER) Call 2019

A [new Exploratory Research \(ER\) Call](#) was released on 30th April 2019 and covers the period 2019-2021.

The deadline for submissions is currently 10th September 2019. This call consists of two work areas addressing “ATM excellent science and outreach” and “ATM application-orientated research”, with a budget for these activities of €38.5M in 2019. The topics to be researched in this call cover automation, digitalisation, safety and changes in the future ATM environment among others, with a full list found on the [Horizon 2020 website](#).

An overview of all the activities relating to SESAR projects since 2015 is presented in the timeline below.



**Figure 2: Activities relating to SESAR projects since 2015**

An interim [evaluation of the SESAR JU operating under Horizon 2020](#) was published in October 2017, as required by both the regulation establishing the SJU and the Horizon 2020 regulation.



# SESAR DEPLOYMENT

## SESAR DEPLOYMENT

The Commission adopted, with the favourable opinion of the SSC, the Implementing Regulation (IR) [\(EU\) No 409/2013](#) on the governance of SESAR Deployment in May 2013. The IR defines [four key instruments](#) needed for SESAR deployment within the SES framework;

- 1 Common projects;
- 2 The deployment programme;
- 3 A governance mechanism; and
- 4 Targeted incentives.

**The governance of SESAR Deployment is at three levels:**

- 1 **Policy level:** Established by the Commission, who are directly responsible for it, the Policy level adopts Common Projects, appoints the Deployment Manager, oversees SESAR deployment and ensures it is aligned with the SES regulatory framework, and decides on the allocation of the Union's budget in support of deployment activities;
- 2 **Management level:** The responsibility for the management level of the deployment governance is held by the Deployment Manager. The SESAR Deployment Alliance (SDA) was appointed as the Deployment Manager by the European Commission on 5th December 2014 with the signing of the SESAR Deployment Framework Partnership Agreement. The Management level develops, maintains and implements the Deployment Programme, and manages the implementation level; and
- 3 **Implementation level:** Consists of individual implementation projects to execute the Deployment Programme.

# POLICY LEVEL

## Pilot Common Project (PCP)

The PCP IR ([EU No 716/2014](#)) was published in June 2014. The PCP mandates the implementation of six ATM Functionalities (AFs) across specified stakeholders. A 2016 [status report](#) on the progress of SESAR deployment was completed upon request from the European Parliament's TRAN Committee.

## Review of the PCP and Common Project 2 (CP2)

In April 2017, the Commission mandated the SDM to develop a proposal for the revision of the PCP CIR. This was in response to the legislative requirement in Article 6 of the PCP CIR, which states that *'the Commission shall initiate the first review at the latest, 18 months from the approval of the deployment programme'*.

The SDM submitted the proposal for the revision of the PCP IR on 30th November 2017. The changes proposed by the SDM to the PCP CIR were consulted with all stakeholders within the SDM Stakeholder Consultation Platform and covered by the [Cooperative Arrangements](#).

Additionally, in March 2017 the Commission mandated the SJU to develop a recommendation on the content of the next Common Project (CP2). The CP2 proposal was submitted to the Commission on 2nd February 2018.

The Commission is currently reviewing the CP2 proposal and PCP review in coordination with the SJU and SDM. The actors at the "policy level" of SESAR Deployment governance will then be asked for their opinion, following which an initial "technical and economic proposal" for both initiatives will be produced for public consultation. The consultation will be used to refine the proposals and prepare the draft legal text(s). This is expected to be released by the end of 2019. The SDM will also perform a new CBA on the revised PCP.

On 25th June 2019, the European Court of Auditors released [special report no 11/2019](#) on SESAR deployment. This concluded that the EU's regulatory intervention in the form of common projects has added value, but also found that EU funding in support of ATM modernisation was largely unnecessary and that the management of the funding is affected by some shortcomings.



# MANAGEMENT LEVEL

## Deployment Manager

In accordance with [IR \(EU\) No 409/2013](#), responsibility for the management level of the deployment governance is held by the SDM. The SDM's coordination tasks are funded through grants for Programme Support Actions managed by DG MOVE and CEF grants for implementation projects, which are managed by [INEA](#).

As of 1st January 2018, SDA is a legal entity as a non-profit "International Association". This change has been made in order to consolidate the management of the activities that synchronise the deployment of the PCP.

The SDA signed cooperative arrangements with a number of interfaces, including with [SJU](#), [EDA](#), [EUROCAE](#), the [EIB](#), and the [NM](#).

To facilitate the industrialisation processes for PCP SESAR solutions, and to ensure the timely availability of standards and products, in March 2017 the SDM signed a series of [MoUs with the manufacturing industry](#), which covered 20 ATM-related manufacturers.

## Deployment Programme (DP)

The DP sets out a plan to implement all elements of the PCP and is the reference for the Call for Proposals for public funding of actions aimed at the deployment of Common Projects. The [2018 version of the DP](#) was officially approved by the Commission on 19th December 2018.

**The DP is complemented by Guidance Material (GM) for SESAR Deployment Programme Implementation. This guidance is comprised of two documents:**

- **The Monitoring View** – the [2018 Monitoring View](#), released on 19th December 2018, provides an overview of the current implementation status of the PCP within Europe.
- **The Planning View** - [2018 Planning View](#), released on 19th December 2018, provides a more detailed planning tool for Operational Stakeholders involved in the deployment of PCP regulation, defining the scope of implementation and suggested approach to deployment.

All documentation, including [Annexes](#), can be found within the publications on the [SDM website](#).

## Data Link Services (DLS)

On 19th October 2016, the Deployment Manager was tasked by the Commission as the Data Link Services (DLS) Implementation Project Manager. A [DLS Recovery Plan](#) and the '[DLM2 – Measurements Analysis and Simulation Campaign \(ELSA study\)](#)', were published by the SDM on 17th October 2016. The DLS Recovery Plan is organised into two 'Paths':

- Path I, which covers the Implementation of the DLS transitional solution, and aims to meet the requirements of [IR \(EU\) 2015/310](#) and ELSA's recommendations; this was completed in February 2018.
- Path II commenced in March 2017.

The definition of Service Areas and technical architecture was completed in September 2017. The development of an accompanying Business Case and the definition of transitional activities and DLS governance are in progress. In September 2017 the SDM published a [Report on Service Areas and DLS overall Architecture](#).

In October 2017, EASA released its final version, V1.3, of the report "[Commission Regulation \(EC\) No 29/2009 – Data Link Services Exemptions](#)", the objective of which was to:

- update Article 14 (3) (Exemptions) to include aircraft types and models;
- update the references to ICAO documents; and
- correct minor errors introduced by the previous update.

Datalink was included in the priority families for the [2017 CEF Transport SESAR Call for funding](#), and the SDM encouraged the submission of projects contributing to the implementation of the DLS Recovery Plan.

On 5th April 2018, a multi-stakeholder IP called IP1 was submitted as part of the 2017 CEF Transport Calls. The IP aimed to address any open points that had emerged from the execution of the Path II Project and the Common European ATN Ground Network design phase. The IP1 was launched on 12th April 2018 in Madrid and is divided into three Work Packages:

- **WP1** – Design of a Common European ATN Ground Network for the provision of the European DL Services;
- **WP2** – Further analysis and development of solutions to the technical open points identified in the Path II project, including the overall target architecture definition and finalisation;
- **WP3** – Further analysis and development of solutions to the non-technical open points identified in the Path II project, including the identification of all the needed elements to finalise the Business Case.

In parallel to IP1, SDM launched a [call for tender](#) on 4th May 2018 for a DLS Capacity Study, requesting the successful tenderer to provide an update of the VDL Mode 2 Capacity and Performance Analysis performed by SJU. The result will provide details on VDL M2 capability to support the evolving datalink services, and to inform the Commission as to when a greater datalink capacity and performance than VDL M2 will be needed. [Paris Lodron University of Salzburg was selected](#) to undertake the study in October 2018 and the study should be completed in 2019.

A dedicated [website](#) has been created as a point of reference for up-to-date information on DLS implementation in Europe. The content of this website is provided by the partners mandated to contribute to the DLS Recovery Plan, under the coordination of the SDM.

The most recent public [DLS workshop](#) was held on 17th January 2019, in Brussels, to provide a status update on each of the DLS work packages.

The final amendment to DLS IR 29/2009, [Commission Implementing Regulation \(EU\) 2019/1170](#) was published on 8th July 2019. See section [Status of EASA Rulemaking Activities](#) for more information.

## Implementation level

An SDM report on the [DLS implementation status](#) was published in August 2018. Information on funding via the CEF Transport Calls for Proposals, including the 2017 Calls, can be found under [Funding and Financing Modernisation in ATM](#), within the [EU Policy](#) Section of this document.

## Automatic Dependent Surveillance - Broadcast (ADS-B)

Commission Implementing Regulation (EU) 1207/2011 lays down the requirements on the systems contributing to the provision of surveillance data, their constituents and associated procedures. The regulation has been amended twice, by (EU) 1028/2014 and (EU) 2017/386. The most recent amendment postpones the aircraft equipment date to 7th June 2020, allowing time to improve certification processes and the availability of the required equipment.

On 4th July 2018 the Commission held a workshop on the implementation of Regulation (EU) No 1207/2011. It provided updates on the implementation status – covered by SDM's report on [ADS-B and other means of surveillance implementation status](#) – EASA's report on the revision of the SPI IR, and the outlined plan of Air-Ground synchronised ADS-B implementation.

The SESAR Deployment Manager was requested by the Commission to develop an implementation plan to map, guide and support a broader adoption of ADS-B as a surveillance technique alongside radar and multi-lateration. On 15 November 2018, a consultation was launched on the plan, which concluded on 12th December 2018 at a meeting of the SDM Stakeholder Consultation Platform. The plan was submitted to the Commission on 21st December 2018.

A dedicated website to the implementation status of ADS-B is available [here](#).



# INTEROPERABILITY

## IMPLEMENTING RULES

The Commission and EASA are currently working to resolve a number of issues with existing implementing rules, including ADQ, SPI, VCS and DLS.

### Aeronautical Data Quality (ADQ) IR

An [NPA on AIS/AIM](#), linked to the ADQ IR, was published by EASA on 27th April 2016; EASA closed the comments review on 30th June 2017. EASA published the draft text of [Opinion 02/2018](#) on 8th March 2018, proposing an update of Regulation (EU) 2017/373 to include the latest proposed amendment to ICAO Annex 15 and the new Procedures for Air Navigation Services – Aeronautical Information Management (PANS-AIM) – and the repealing of the current [Regulation \(EU\) No 73/2010](#) (the ‘ADQ Regulation’). Official publication of this decision is pending; however, [draft material](#) has been made available.

### Surveillance Performance and Interoperability IR

[EASA Rule Making Task \(RMT\).0679](#) was launched in 2015 to revise [Regulation \(EU\) No 1207/2011](#) (the SPI IR). This was in line with step two of the Commission’s two step approach to updating the IR.

The Commission, on the basis of EASA recommendations, published [Regulation \(EU\) 2017/386](#), amending the SPI IR and extending the deadline for equipping aircraft to 7th June 2020, in March 2017. A [consolidated version of the SPI IR](#) is also available.

In December 2017 EASA released a proposed amendment in the form of a report to the Commission on ensuring a balanced application of current surveillance technologies.

The SPI IR exemption criteria are currently under review, and the amended regulation is expected to be published late 2019.

### Voice Channel Spacing (VCS) 2 IR

The Commission held a workshop on 8.33 kHz VCS implementation in January 2015 to assess the implementation of the VCS 2 IR ([Regulation \(EU\) No 1079/2012](#)), resulting in the NM taking on a central role in VCS implementation and reporting to the SSC.

[Implementing Regulation \(EU\) 2016/2345](#), which amends the VCS 2 IR as regards references to ICAO provisions, was published on 14th December 2016. A [consolidated version of Regulation \(EU\) No 1079/2012](#) and its amendments is also available.

A second workshop on 8.33 kHz VCS implementation was held in November 2017; following this, the NM developed a report on the 8.33kHz VCS implementation status, which was presented during SSC/68 on 13-14th March 2018. Following the publication of the report, the NM was invited by the Commission to work together with EASA on a network interoperability and impact assessment of the 8.33 kHz implementation.

In May 2018, the first conclusions of the assessment were sent for comment to the 8.33 kHz National Coordinators and National Frequency Managers. The results of the Network Impact Assessment of the Member States notified exemptions were presented at SSC/69 (available on the membership portals).

## DLS IR

[Regulation \(EU\) 2015/310](#), amending [\(EC\) 29/2009](#), was published on 26th February 2015. The ground implementation deadline was 5th February 2018, and the airborne implementation deadline is 5th February 2020. Additionally, the SDM has produced an individual report for each Member State detailing their DLS implementation status and any actions to be performed in the months following March 2018.

The [final report containing EASA's proposal for DLS exemptions](#) was published in October 2017. At the SPI IR Commission workshop held on 4th July 2018, the Commission stated that exemptions for equipping aircraft after the 2020 deadline can be made, provided there is a credible plan for implementation and adequate justification. An amendment to the DLS regulation ([2019/1170](#)) clarifying the exemption criteria was published on 8 July 2019.

Additionally, a Rule Making Task, [RMT.0524](#), covering Model D, end-to-end certification, best-in-class avionics and the PCP AF6, has been created and its [ToRs](#) were released on the 29th January 2018. The launch meeting of the RMT was held in January 2018 and the NPA is planned to be released in Q2 2020.

On 3rd October 2018, EUROCAE published the ED-92C standard which contains [Minimum Operational Performance Standard \(MOPS\) for an Airborne VDL Mode-2 System Operating in the Frequency Range 118-136.975 MHz](#).

## PBN IR

EASA published [Opinion 10/2016](#) on 2nd August 2016 (presented to SSC/63, with amendments at SSC/64) on the issues related to the implementation of Performance-Based Navigation (PBN) within the European airspace. The SES Navigation Strategy and PBN Workshop was held on 20th March 2017. Workshop material and summary reports from the Navigation Strategy and PBN Implementing Regulation workshop are available on the membership portals.

On 18th July 2018, the Commission published the final rule, [Regulation \(EU\) 2018/1048](#), which lays down airspace usage requirements and operating procedures concerning performance-based navigation and shall apply from 3rd December 2020. Guidance material has been produced to support the implementation of this through [ED Decision 2018/013/R](#) in November 2018.

EASA is progressing with the completion of the Acceptable Means of Compliance (AMC) / Guidance Material (GM) and preparing to issue an NPA that will update the Certification Specifications for Airborne Communication Navigation and Surveillance (CS-ACNS) to incorporate new certification criteria to support PBN operations.

## Common Requirements IR

Information on the IR that sets out Common Requirements for Service Providers and Oversight in ATM/ANS can be found in the [Safety](#) section.

## CONFORMITY ASSESSMENT

The revised EASA Basic Regulation ([2018/1139](#)) incorporates rules for interoperability, repealing and replacing the SES Interoperability Regulation ([552/2004](#)). Certain articles of 552/2004, including Article 5, “EC declaration of conformity or suitability for use of constituents”, will stay applicable until relevant delegated acts of the EASA BR come into effect, but no later than 12th September 2023.

SES 2+ recognises Conformity Assessments as within the remit of the EASA Basic Regulation, rather than SES regulation. An RMT on the future of Conformity Assessment, originally scheduled to start in 2016, has been postponed until 2020.

## ATM STANDARDISATION – EASCG

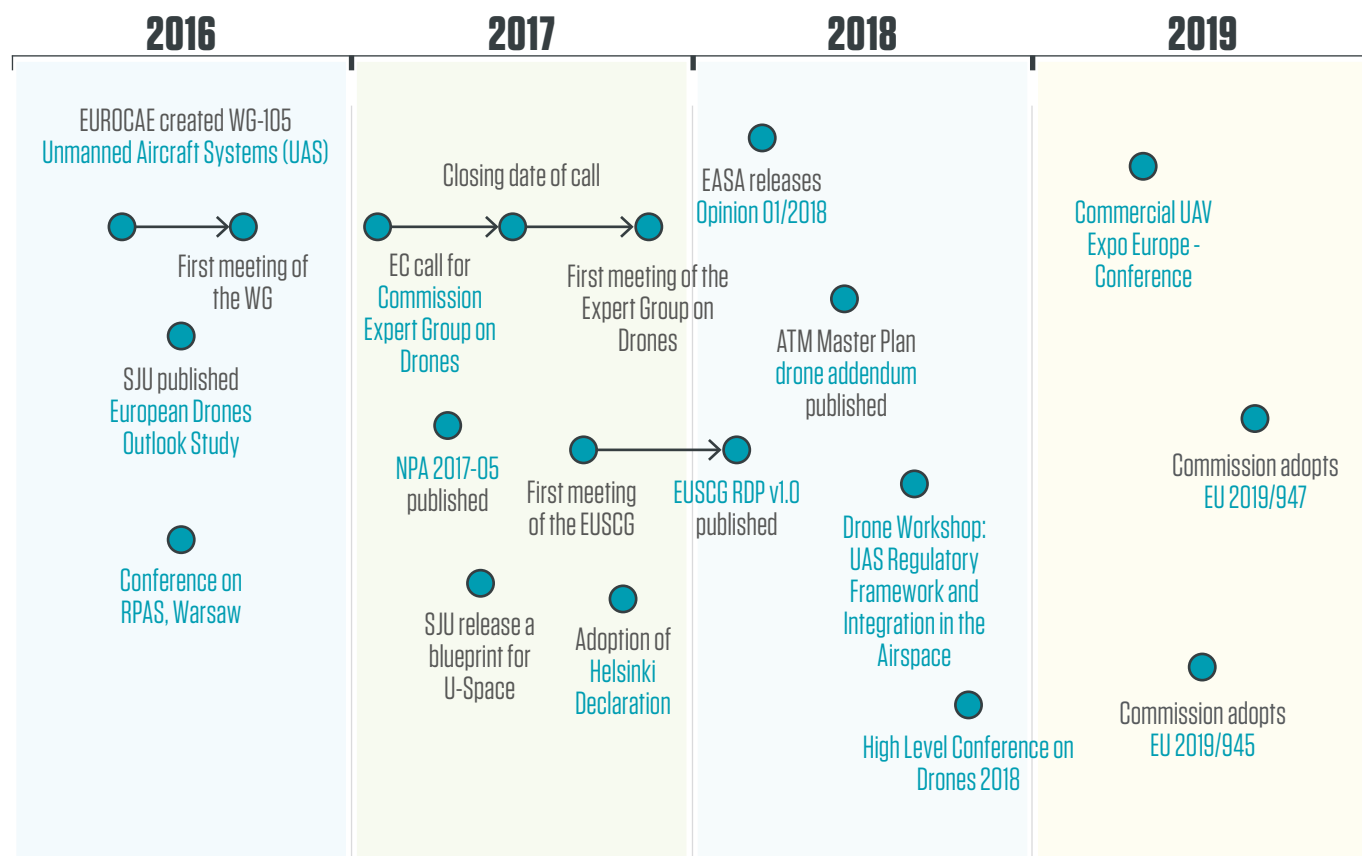
The [European ATM Standards Coordination Group \(EASCG\)](#) was created in 2015 to coordinate ATM-related standardisation activities that arise from the European ATM Master Plan, in support of SES implementation.

The main task of the EASCG is the development, monitoring and maintenance of an overarching [European ATM standardisation Rolling Development Plan](#) (RDP), which is based on the current roadmap from the SESAR framework, inputs from the EASCG members (including the military), and, where needed, other key actors in the aviation domain. The [latest version of the RDP](#) (V8) was published on 11th March 2019.



# REMOTELY PILOTED AIRCRAFT SYSTEMS (RPAS)

The timeline below shows the activities related to Remotely Piloted Aircraft Systems (RPAS) to date, which are summarised in the following text.



**Figure 3: Timeline on the Remotely Piloted Aircraft Systems (RPAS) activities to date**

## REGULATORY FRAMEWORK

On 1st December 2016, the European Council agreed on a [general approach](#) to revised common safety rules for civil aviation and a new mandate for EASA, containing the first ever EU-wide rules for civil drones flying in European airspace. At the end of 2016, the Commission proposed the creation of an EU-wide framework for drones as part of its [Aviation Strategy](#) and also [proposed](#) to remove the 150kg threshold to allow for regulation regardless of weight.

Following [A-NPA 2015-10](#) and an [Opinion of a technical nature](#) in December 2015, EASA released [Opinion 01/2018](#) on 6th February 2018. The opinion aimed to provide a new regulatory framework defining the safe operation of UAS in the 'open' and 'specific' categories. Following this opinion, on 25th May 2019, the European Commission adopted new rules; [Regulation \(EU\) 2019/945](#) on unmanned aircraft systems and third country operators of unmanned aircraft, and [Regulation \(EU\) 2019/947](#) on the operation of unmanned aircraft.

# UAS STANDARDISATION

## EUROCAE

On 30th September 2016, EUROCAE [announced the creation of EUROCAE WG-105 Unmanned Aircraft Systems \(UAS\)](#), tasked with developing standards and guidance documents that will allow the safe operation of UAS in all types of airspace, at all times and for all types of operations.

## EUSCG

The [European UAS Standards Cooperation Group \(EUSCG\)](#) kicked off in June 2017. The [latest version of the European UAS Standardisation Rolling Development Plan \(RDP\)](#), v3.0, was published on 6th March 2019 and details all standardisation activities, including that of WG-105. The group's focus extends beyond ATM and includes licensing and certification.

# DEVELOPMENT

In November 2016, the SJU published the [European Drones Outlook Study](#), which outlined the developed insights related to the use of drones, with forecasts stretching to 2050.

The EU has committed [€44 million](#) under Horizon 2020/SESAR to the integration of drones.

The [final version](#) of the blueprint for the development and rollout of U-space was published on 9th June 2017; it seeks to refine the concept of U-Space and to establish a timeline for the introduction of safe, widespread drone operations throughout Europe by 2019.

On 21st March 2018, the SJU published a [drone addendum](#) to the ATM Master Plan, which is discussed in the [SESAR Development](#) section.

On 19th October 2018, the Commission officially launched the [European Network of U-Space Demonstrators](#), which is a joint initiative between EASA, [SJU](#) and Eurocontrol. This is to allow large scale demonstration projects and to further develop U-Space.

# WORKSHOPS AND CONFERENCES

A [High-Level Conference on RPAS](#) was held by the Commission in November 2016, in Warsaw. The SESAR Call for VLDs from December 2016 includes actions to demonstrate some more advanced 'U-Space' (very low-level flights) concepts.

On 22nd November 2017, the Commission, national authorities and industry adopted the "[Helsinki Declaration](#)" at a high-level conference on drones organised by the Commission and the Finnish authorities. It calls on stakeholders to cooperate on related legal requirements, investments and standard-setting processes.

On 12th and 13th of June 2018, EASA organised a [Drone Workshop: UAS Regulatory Framework and Integration in the Airspace](#), which covered multiple aspects of the integration of drones in the aviation ecosystem including citizens' safety, security and privacy.

EASA held a [High Level Conference on Drones 2018](#) on 27th and 28th of November 2018, which aimed to bring to the table discussions on topics related to the development of a common European market for drones. Members of the conference adopted the '[Amsterdam Declaration](#)' which urges European Institutions and industry to continue good progress towards the delivery of common EU drone services.

EASA held a [U-space workshop](#) on the 14th and 15th May 2019. The aim of the workshop was to present the draft regulatory proposal, discuss the principles that will govern U-space and consult with stakeholders.

EASA plan to hold a high level conference on drones at the second edition of the Amsterdam Drone week between 5-6th December 2019. The event is expected to focus on 'Scaling drone operations' and 'Enabling Airspace Integration'. Moreover, the conference will discuss the development of a common European market for drones.

# ATM CYBERSECURITY

## REGULATORY FRAMEWORK

### ICAO

ICAO's [Annex 17 to the Convention on International Civil Aviation](#), Security – Safeguarding International Civil Aviation against Acts of Unlawful Interference, contains Standards and Recommended Practices (SARPs). Amendment 16 has strengthened cybersecurity requirements.

In 2017 ICAO established the Secretariat Study Group on Cybersecurity (SSGC) to coordinate the work of a collection of working groups, which are tasked with investigating all areas where aviation could be threatened by cyber incidents and attacks. A Trust Framework Study Group (TFSG) has also been established and met for the first time in May 2019.

### Network and Information Security (NIS) Directive

The [Network and Information Security \(NIS\) \(Directive \(EU\) No 2016/1148\)](#) is the first EU-wide legislation on cybersecurity, and aims to establish minimum security standards for Member States and operators of critical national infrastructure, which likely includes ANSPs and many major airports and airlines. The current implementation status can be found [here](#).

### EASA Rules

The Common Requirements IR ([IR \(EU\) 2017/373](#)) stipulates that providers of ATM/ANS shall establish a Security Management System (SecMS). It also mandates that ATM and ATFM providers must act to protect their systems, constituents in use and data, and prevent compromising the network against information and cybersecurity threats.

The new EASA BR ([Regulation \(EU\) No 2018/1139](#)), published on 22nd August 2018, contains provisions for EASA to offer assistance to the EC and recommend corrective actions where interdependencies exist between civil aviation safety and security, including cybersecurity.

EASA are developing a cybersecurity horizontal rule (Part AISS ([RMT.0720](#))) to create a legislative framework for future protection of the aviation system from cyber-attacks. The NPA ([NPA 2019-07](#)) for this was published on 27th May 2019 and comments can be submitted until 27th September 2019. It is entitled “Management of information security risks”.



# GUIDANCE AND ACTIVITIES BY EUROPEAN ORGANISATIONS

## EASA

In 2017, EASA established the European Strategic Coordination Platform (ESCP) to coordinate the European strategy for aviation cybersecurity.

EASA has also established a [European Centre for Cyber Security in Aviation](#) (ECCSA) which is currently in its pilot phase and is open to eligible organisations that would like to become [members](#). This is primarily an information centre for cybersecurity in aviation, facilitating closer interaction between all relevant stakeholders, including industry, Member States, the SJU and Eurocontrol.

## EUROCAE

WG-72 – Aeronautical Systems and Security – develops specifications and guidance for aeronautical system security. ED-205, entitled ‘Process Standard for Air Traffic Management/Air Navigation Services (ATM/ANS) Ground Systems Security Aspects for Certification/Declaration’, was published in March 2019.

The European Cybersecurity Standardisation Coordination Group ([ECSCG](#)) met on 23rd January 2019. The ECSCG RDP is in development.

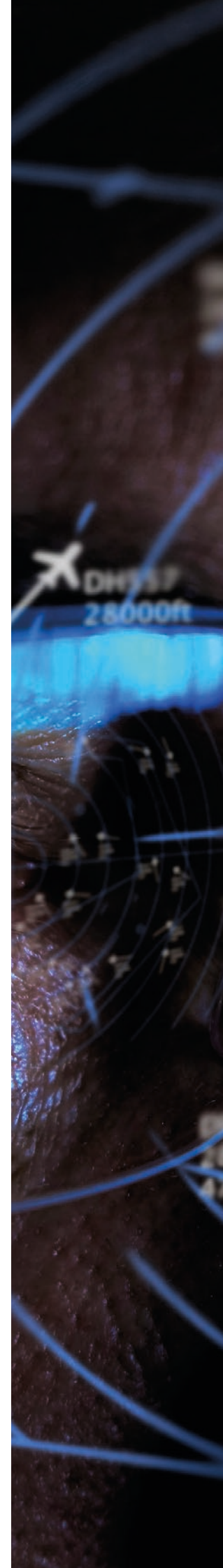
## CEN

The [European Standard EN 16495](#) on “Air Traffic Management – Information security for organisations supporting civil aviation operations” is being updated and is expected to be published in 2019.

# WORKSHOPS AND CONFERENCES

**EASA held a Conference on Cybersecurity in Aviation in May 2015. This was followed by:**

- The [2016 High-Level Meeting on Cybersecurity in Civil Aviation](#), held in Bucharest on 8th-9th November 2016.
- A [workshop on cybersecurity in aviation](#) was held by EASA and EUROCAE on 31st May 2017 in Brussels to initiate discussions on future rulemaking and standardisation of Cybersecurity in Aviation.
- The [2017 High-Level Meeting on Cybersecurity in Civil Aviation](#), held in Krakow on 8th-9th November 2017.
- The [ESCP High-Level Meeting on Cybersecurity in Civil Aviation](#), held in Toulouse on 14th-15th November 2018.
- The [1st Transport Cybersecurity Conference](#) was held in Lisbon on 23rd January 2019, and the conference conclusions can be found [here](#).



# HUMAN FACTORS

## HUMAN PERFORMANCE IN SESAR

### SESAR 1 Achievements

SESAR 1 included Human Performance (HP) as a [transversal solution](#) in a dedicated [Work Package](#) (WP 16). Projects related to HP were tasked to produce reference guidance material (including the use of a [repository](#)) that considers Human Factors along the project lifecycle (for both operational and technical projects).

A joint methodology to perform Human Performance Assessments was developed to help link airborne and ground partners and establish a Human Performance Assessment related to an ATM concept from a wider perspective. It is strongly connected with validation.

### SESAR 2020

The Human Performance Assessments methodology developed during SESAR 1 is being applied in SESAR 2020 and serves as a state-of-the-art reference to assess human performance in SESAR projects with major human impact.

This methodology is incorporated into the SESAR 2020 programme to ensure the needs of the human-centred design are integrated within the project environment. Research funding is currently available on numerous ATM Human Factors topics, with further information found on the [Horizon 2020](#) website.

## EXPERT GROUP ON THE HUMAN DIMENSION OF THE SES (EGHD)

The [Expert Group on the Human Dimension of the SES](#) (EGHD) was formally established by [Commission Decision C\(2017\) 7518](#) on 21st November 2017. The focus on the group's work is on Human Factors involved in ATM and SES initiatives, in particular those relating to SESAR. Among other tasks, the group advises the Commission on the implementation and development of the SES as regards measures that have significant implications for the human dimension.

# EU-US COLLABORATION IN ATM MODERNISATION

The Federal Aviation Administration's NextGen (Next Generation Air Transportation System) and the EU's SESAR are the two largest ATM modernisation projects currently under way; the US and EU collaboration aims to harmonise and secure ATM modernisation and global interoperability efforts between these two projects.

In March 2019, the [latest report on the US/EU comparison of Air Traffic Management -Related Operational Performance](#) was released. The report is the sixth in a series of joint ATM operational performance comparisons between the US and Europe.

The [third edition of the NextGen – SESAR Joint State of Harmonisation](#) was published in September 2018, providing a high-level summary of the current state of progress towards achieving harmonisation and global interoperability between NextGen and SESAR.

The collaborative harmonisation work between the US and the EU has taken place under the [Memorandum of Cooperation \(MOC\) between the United States of America and the European Union on Civil Aviation Research and Development](#), which was signed in March 2011. On 13th December 2017, it was announced that the [United States and the European Union have signed Amendments](#) to the [MOC](#), expanding the agreement to cover the full lifecycle of ATM modernisation activities, and the [US-EU Aviation Safety Agreement](#).

# 4 SAFETY



# SAFETY

**This section provides an overview of developments in European ATM technology, covering the following topics:**

- **Common requirements for service providers and their oversight:**  
A summary of the subject regulation and EASA Rulemaking activity;
- **Revised EASA Basic Regulation:** An overview of the update to the EASA Basic Regulation;
- **European Plan for Aviation Safety (EPAS):** An overview of the European Plan for Aviation Safety; and
- **EASA Annual Safety Review 2019:** An overview of the Annual Safety Review 2019.

Note that a full overview of EASA's Rulemaking activities is provided in the [Status of EASA Rulemaking Activities](#) section of the [Annexes](#).

More information on EASA's activities can be found in the [EASA Annual Activity Report 2018](#) and the [EASA Single Programming Document \(SPD\) 2019-2021](#) (which includes EASA's Work Programme for 2019).

## COMMON REQUIREMENTS FOR SERVICE PROVIDERS AND THEIR OVERSIGHT

Commission Implementing Regulation (IR) [\(EU\) No 2017/373](#) was published on 1st March 2017, repealing Regulation [\(EC\) No 482/2008](#), and IRs [\(EU\) No 1034/2011](#), [\(EU\) No 1035/2011](#) and [\(EU\) 2016/1377](#), and amending Regulation [\(EU\) No 677/2011](#).

The regulation amalgamates IRs [\(EU\) No 1034/2011](#) (Safety Oversight) and [\(EU\) No 1035/2011](#) (Common Requirements) into a single rule. It lays down common requirements for:

- the provision of air traffic management and air navigation services (ATM/ANS) and for other ATM network functions, in particular for the legal or natural persons providing those services and functions; and
- for the competent authorities and the qualified entities acting on their behalf, which exercise certification, oversight and enforcement tasks in respect of those services and functions.

[Acceptable Means of Compliance and Guidance Material](#) for the revised common requirements regulation were published on 8th March 2017. In June 2018 EASA published an updated version of the [Easy Access Rules for Regulation \(EU\) No 2017/373](#) which was first published on 22nd November 2017.

The common requirements are being regularly maintained through RMT.0719. Further details on the work of the RMT can be found in the [Status of EASA Rulemaking Activities](#) section of the [Annexes](#).





## REVISED EASA BASIC REGULATION

The revised EASA Basic Regulation was adopted by the Council on 4th July 2018 and was published on the EU's Official Journal on 22nd August 2018 with a date of effect of 11th September 2018 ([Regulation \(EU\) No 2018/1139](#)).

The text extends EASA's mandate to include safety-related aspects of security, such as cyber security, and the protection of the environment. It provides the possibility to establish a mechanism for pooling and sharing of aviation inspectors and other experts. It also covers new rules with regard to oversight activities, including a support mechanism for Member States for technical assistance for certification, oversight and enforcement tasks. EU-wide rules on drones provide the basic principles to ensure safety, security, privacy and protection of data, with an additional provision for EASA to develop more detailed rules through Commission implementing and delegated acts.

## EUROPEAN PLAN FOR AVIATION SAFETY (EPAS) 2018-2022, INCLUDING THE EASA RULEMAKING AND SAFETY PROMOTION PROGRAMME

[European Plan for Aviation Safety \(EPAS\) 2019-2023](#), including the Rulemaking and Safety Promotion Programme (RMP) was published in January 2019. For this edition, EASA has updated the previous version with specific focus on; alignment with the ATM Master Plan, integrating safety information from both the Standardisation Annual Report and the Annual Safety Review 2019 (ASR), alignment with the New Basic Regulation ([Regulation \(EU\) 2018/1139](#)).

The edition also includes; safety performance indicators, new actions for States to implement their own Aviation Safety Plans and better reflects the current EU regulatory system capacity.

The EPAS provides a high-level assessment of safety issues and a related action plan. It is continuously reviewed and developed in consultation with Member States and industry through the Safety Risk Management (SRM) process. The Plan addresses systemic issues - those that affect aviation as a whole – and operational issues – those related to events reported during operations and evident through data analysis. Operational issues are considered in the following terms: key risk areas that the EPAS seeks to prevent, safety issues that contribute to key risk areas, and emerging issues that are expected to lead to key risk areas in the future. Moreover, EASA published a [2019-2023 EPAS leaflet](#) which summarises the strategic priorities, enablers and key actions from the full report.

# EASA ANNUAL SAFETY REVIEW 2019

The [EASA Annual Safety Review 2019](#) was published on 31st July 2019. It provides a statistical summary of aviation safety in EASA Member States and highlights the key safety challenges faced in European aviation today. The document uses inputs from the Safety Risk Management Process (SRM) in particular the Network of Analysts (NoA) and Collaborative Analysis Groups (CAGs). The review serves as a mechanism to drive the development of safety actions for the EPAS and allows for the current and future priorities of the Agency to be established.

The [States' implementation report](#) on EPAS 2017 to 2021 was published on 20th February 2018 and provides an overview of how the EPAS actions owned by the States are being implemented. It highlights areas of difficulty and good practice which can serve as examples for other states.

## EUROPEAN CENTRAL REPOSITORY – RIGHTS TO SAFETY RECOMMENDATIONS AND RESPONSES

[Commission Implementing Decision \(EU\) 2019/1128](#) was adopted on 1st July 2019 and relates to access rights to safety recommendations and responses stored in the European Central Repository. The Decision repeals Decision 2012/780/EU and lays down measures on the management of the European Central Repository set up in accordance with Regulation (EU) No 376/2014.

The Decision outlines that safety recommendations and their responses contained in the European Central Repository should be made available to the general public through a public website established and managed by the Commission.

## ANNUAL SAFETY RECOMMENDATIONS REVIEW 2018

The 12th edition of the [Annual Safety Recommendations Review \(2018\)](#) report was published on 31st July 2019. The report details the safety investigation and follow-up activity performed by EASA and features the safety issues and EASA safety improvement efforts over the year.

### **The report presents:**

- General statistical data on the safety recommendations addressed by safety investigation authorities to EASA in 2018;
- Replies that EASA has given to safety recommendations in 2018;
- Main safety topics related to the above-mentioned recommendations and/or replies that have been addressed through actions taken.

# 5 ANNEXES



# USEFUL RESOURCES

Strategy Documents	Date of Publication
<a href="#">Report of the Wise Persons Group on the Future of the Single European Sky</a>	April 2019
<a href="#">Airspace Architecture Study</a>	March 2019
<a href="#">European Network Operations Plan</a>	April 2019
<a href="#">European ATM Master Plan – Roadmap for the safe integration of drones into all classes of airspace</a>	March 2018
<a href="#">European ATM Master Plan Level 3, 2019 Implementation Plan</a>	June 2019
<a href="#">European ATM Master Plan Level 3, 2019 Implementation Report</a>	June 2019
<a href="#">Aviation Strategy for Europe</a>	December 2015
ATM Performance and Benchmarking	
<a href="#">U.S./Europe comparison of ATM Operational Performance 2017</a>	March 2019
<a href="#">U.S./Europe comparison of ANS cost-efficiency trends 2006-2016</a>	March 2019
<a href="#">ATM cost-effectiveness (ACE) 2017 Benchmarking Report with 2018-2022 outlook</a>	May 2019
<a href="#">CODA Digest Q1 2019</a>	March 2019
<a href="#">Annual Network Operations Report 2018</a>	March 2019
<a href="#">Network Operations Report – May 2019</a>	June 2019
<a href="#">Monthly CODA Reports</a>	Latest: March 2019
<a href="#">CANSO Global ANS Performance Report 2018: ANSP View</a>	December 2018
<a href="#">CANSO Global ANS Performance Report 2018: Executive Summary</a>	December 2018
PRB Publications	
<a href="#">PRB Performance Dashboard</a>	Monthly Updates
<a href="#">Advice to the Commission in the setting of Union-wide performances targets for RP3</a>	September 2018
<a href="#">Impact assessment of options for regulatory approach in RP3 of the SES Performance and Charging Schemes</a>	February 2018
<a href="#">PRB Annual Monitoring Report 2017<sup>5</sup></a>	November 2018
Safety	
<a href="#">European Plan for Aviation Safety 2019 - 2023</a>	January 2019
<a href="#">ICAO Safety Report 2018</a>	August 2018
<a href="#">EASA Annual Safety Review 2019</a>	July 2019
<a href="#">The European Plan for Aviation Safety (EPAS) 2019-2023</a>	January 2019
<a href="#">Global Aviation Safety Plan (ICAO) 2017-2019</a>	December 2016
<a href="#">EASA Practices for risk-based oversight (RBO)</a>	November 2016

<sup>5</sup> PRB 2016 Annual Monitoring Report is now [available via the eu single sky portal](#), which may require you to create an account to access it

# USEFUL RESOURCES

Traffic Forecast	Date of Publication
<a href="#">STATFOR Industry Monitor</a>	Latest: July 2019
<a href="#">STATFOR Seven-Year Forecast</a>	February 2019
<a href="#">STATFOR Intermediate Two-Year Forecast – May 2019</a>	June 2019
<a href="#">STATFOR Very Long-Term Forecast 2018 to 2040</a>	September 2018
SES Compliance	
<a href="#">EPRS Briefing on Interim evaluation of Horizon 2020</a>	March 2018
<a href="#">EPRS Briefing on Public-Private Partnerships in Research</a>	May 2017
<a href="#">LSSIP State Reports</a>	2018
SESAR JU and SESAR Deployment	
<a href="#">Airspace Architecture Study</a>	March 2019
<a href="#">SESAR Deployment Programme 2018</a> (complemented by the proposed 2018 <a href="#">SDM Monitoring view</a> , <a href="#">SDM Planning view</a> and <a href="#">Annexes</a> (previous complementary documentation can be found <a href="#">here</a> ))	December 2018
<a href="#">Digitalising Europe's aviation infrastructure</a>	November 2017
<a href="#">Final evaluation of the SJU operating under the SESAR 1 Programme</a>	October 2017
<a href="#">Interim evaluation of the SJU operating under Horizon 2020</a>	October 2017
<a href="#">SESAR Solutions Catalogue</a>	June 2017
<a href="#">SJU Consolidated Annual Activity Report 2017</a>	June 2018
<a href="#">European Drones Outlook Study</a>	November 2016
<a href="#">SESAR Joint Undertaking Single Programming Document (2019 - 2021)</a>	April 2019
<a href="#">NextGen-SESAR: State of Harmonisation</a>	September 2018
<a href="#">SESAR 2020 Multi-Annual Work Programme</a>	July 2015
Other Documents	
<a href="#">Challenges of Growth 2018</a>	July 2018
<a href="#">ECA: Single European Sky: The EU's regulation for the modernisation of air traffic management has added value – but the funding was largely unnecessary</a>	June 2019
<a href="#">NextGen Priorities Joint Implementation Plan CY 2019-2021</a>	June 2019
<a href="#">EASA: UAS Safety Risk Portfolio and Analysis</a>	October 2016
<a href="#">TRAN Committee: Safe integration of drones into airspace</a>	September 2016
<a href="#">ECA: The Future of Flying in a Single European Sky</a>	2015

**Table 4: Useful Resources**

# COMITOLGY COMMITTEES

Comitology committees assist the Commission in executing its implementing powers by giving an opinion on draft implementing measures before they are adopted. They consist of representatives from all EU Member States, as well as a Commission official as Chair.

**The following Comitology Committees are of relevance to the SES:**

- The Single Sky Committee (SSC);
- The Committee for the application of common safety rules in the field of civil aviation (EASA Committee); and
- The Connecting Europe Facility (CEF) Coordination Committee.

To access SSC dossiers (agendas and summary minutes) use [this link](#) and follow the following instructions:

- 1 In the top box select 'Search for Dossiers';
- 2 In the bottom box ('Committee/Basic legal act') select 'Committee';
- 3 Under service responsible, select 'DG Mobility and Transport' and press 'Search';
- 4 Scroll down and select the Single Sky Committee;
- 5 (Optional - specify any further details in the 'Dossier' box);
- 6 Click the 'Search' button.

SSC working papers are made available via the membership platform.

# COMMISSION EXPERT GROUPS

## Expert Group on Drones

**Documents from the group are available in the additional information tab.**

**Objective:** to advise and assist the Commission with the implementation of actions that can foster and accelerate the integration of drones in the aviation system and the emergence of a suitable operational environment and infrastructure for drones.

## European Observatory on Airport Capacity & Quality

**Documents from the group are available in the additional information tab.**

**Objective:** to advise the Commission on the implementation of the action plan for airport capacity, efficiency and safety in Europe and on any matter relating to airport policy, notably airport capacity.

## Expert Group on the Human Dimension of the Single European Sky

**Agendas and summary minutes are available in the additional information tab.**

**Objective:** to advise the Commission with respect to the implementation and development of the Single European Sky regarding all measures with significant human dimension implications.

## European ATM Standards Coordination Group

**European ATM Standardisation Rolling Development Plan available on the RDP tab.**

**Objective:** to coordinate all relevant standardisation activities.

## Expert Group on Aviation Safety

**Agendas and summary minutes are available in the additional information tab.**

**Objective:** to assist the commission in the preparation of common rules in the field of civil aviation, establishing a European Union Aviation Safety Agency and assisting with the improvement of existing regulation.

## OTHER EXPERT GROUPS

### Wise Persons Group

**Objective:** DG MOVE established a “Wise Persons Group” on the future of the Single European Sky (SES) to produce recommendations for the direction that European ATM should take, in order to deliver better performance and better services while taking into account the continuous growth of air traffic.

### CNS Advisory Group

**Objective:** DG MOVE established a “CNS Advisory Group” to look at how regulations and other policy tools should be used to ensure that the right CNS infrastructure is in place to support future operational concepts.

## PUBLIC CONSULTATIONS

This section provides links to relevant open public consultations, and those which have recently (i.e. since publication of the last ATM Digest in January 2019) closed and/or had their results published.

1 European Commission	
<a href="#">Trans-European Transport Network (TEN-T) Guidelines – evaluation</a>	Consultation period: 24/04/2019 – 17/07/2019
2 European Aviation Safety Agency (ATM relevance only)	
Notices of Proposed Amendments	
Management of information security risks ( <a href="#">NPA 2019-07</a> )	Consultation period: 27/05/2019 – 27/09/2019
Additional AMC and GM for the safety/safety support assessment of changes to the ATM/ANS functional system ( <a href="#">NPA 2019-04</a> )	Consultation period: 11/04/2019 – 11/07/2019
3 EUROCAE	
Minimum Aviation System Performance Standards ( <a href="#">MASPS</a> ) for <a href="#">AMS(R)S Data and Voice Communications Supporting Required Communications Performance (RCP)</a> and <a href="#">Required Surveillance Performance (RSP)</a>	Consultation period: 26/11/2018 – 01/12/2019
<a href="#">MOPS for Avionics Supporting Next Generation Satellite Systems (NGSS)</a>	Consultation period: 26/11/2018 – 01/12/2019
<a href="#">Safety and Performance Standard for Air Traffic Data Link Services in Continental Airspace Change 3</a>	Consultation period: 12/07/2019 – 08/27/2019

**Table 5: Public Consultations**

# ON-GOING LEGISLATION

## SINGLE SKY COMMITTEE

Recently approved Commission Implementing Regulations and Decisions	
<b>Performance Review Body</b> Commission Implementing Decision <a href="#">(EU) 2016/2296</a>	Adopted on 16 <sup>th</sup> December 2016
<b>Expert Group on the Human Dimension of SES</b> Commission Decision <a href="#">C(2017) 7518</a>	Adopted on 21 <sup>st</sup> November 2017
<b>Compliance of unit rates</b> Commission Implementing Regulation <a href="#">(EU) 2018/704</a> Commission Implementing Regulation <a href="#">(EU) 2018/703</a>	Adopted on 8 <sup>th</sup> May 2018
<b>Consistency of performance targets</b> Commission Implementing Decision <a href="#">(EU) 2018/2021</a> Commission Implementing Decision <a href="#">(EU) 2017/2376</a>	Adopted on 17 <sup>th</sup> December 2018 Adopted on 15 <sup>th</sup> December 2017
<b>Revision of performance targets</b> Commission Implementing Decision <a href="#">(EU) 2018/1782</a>	Adopted on 15 <sup>th</sup> November 2018
<b>Reference to ICAO provisions</b> Commission Implementing Regulation <a href="#">(EU) 2018/139</a> (amending Regulation <a href="#">(EU) No 1033/2006</a> )	Adopted on 29 <sup>th</sup> January 2018
<b>PBN IR</b> Commission Implementing Regulation <a href="#">(EU) 2018/1048</a> (Amending Implementing Regulation <a href="#">(EU) No 1332/2011</a> )	Adopted on 18 <sup>th</sup> July 2018
<b>Performance and Charging Schemes</b> Commission Implementing Regulation <a href="#">(EU) 2019/317</a>	Adopted on 11 <sup>th</sup> February 2019
<b>Network Functions</b> Commission Implementing Regulation <a href="#">(EU) 2019/709</a>	Adopted on 6 <sup>th</sup> May 2019
<b>Union-wide Performance Targets</b> Commission Implementing Decision <a href="#">(EU) 2019/903</a>	Adopted on 29 <sup>th</sup> May 2019
<b>Right to safety recommendations and responses</b> Commission Implementing Decision <a href="#">(EU) 2019/1128</a>	Adopted on 1 <sup>st</sup> July 2019

Table 6: On-going Legislation

# EUROPEAN PARLIAMENT PROCEDURES

Proposals awaiting first reading by EP		
None		
Proposals adopted by EP in first reading and awaiting Council position		
Implementation of Single European Sky (Recast)	COM (2013)0410 2013/0186(COD)	Debate in Council on 03/12/2014
Aerodromes, air traffic management and air navigation services: simplifying and clarifying the legal framework	COM (2013)0409 2013/0187(COD)	Proposal withdrawn by Council
Recently adopted acts		
Common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency	COM (2015)0613 2015/0277(COD)	Final act published in Official Journal 22/08/2018
Parliament Own Initiative reports		
Aviation strategy for Europe	2016/2062(INI)	Text adopted by Parliament 16/02/2017
Safe use of remotely piloted aircraft systems (RPAS) in the field of civil aviation	2014/2243(INI)	Text adopted by Parliament 29/10/2015
Implementation of the 2011 White Paper on Transport	2015/2005(INI)	Text adopted by Parliament 09/09/2015

**Table 7: European Parliament Procedures**

# STATUS OF EASA RULEMAKING ACTIVITIES

## OVERVIEW

This section summarises the status of EASA Rulemaking activities for ATM/ANS.

### Common Regulatory Framework

- **ATCO licensing** (RMT.0668): To ensure regular maintenance of the ATCO licencing [Regulation \(EU\) No 2015/340](#), EASA continues work through RMT.0668 “Regular update of ATCO licencing rules”, for which [ToRs](#) were published on 10th August 2017. A second consultation meeting on the proposed amendments was held with the focal points nominated by the EASA Advisory Bodies in March 2019. In parallel, on request of EASA, Eurocontrol have outlined amendments to the ATCO initial training content (AMC). The publication of the corresponding EASA ED Decision is expected for Q3 2019 and should come into force from 2nd January 2020.
- **Technical and Operational Requirements for Remote Tower Operations** (RMT.0624): [ED Decision 2019/004/R](#) and the associated [CRD 2017 21](#) were published on 19th February 2019. The Decision repeals [ED Decision 2015/014/R](#) and amends [ED Decision 2015/015/R](#). It introduces ‘guidelines on remote aerodrome air traffic services’ to support ATS providers and aerodrome operators implementing remote aerodrome ATS, as well as their competent authorities, for multiple and more complex modes of operations. The Decision also proposed a set of updated AMC and GM to Commission [Regulation \(EU\) 2015/340](#).

The draft EPAS 2020-2024 proposes to extend RMT.0624 to further amend the existing ED Decision in accordance with the fast developing technological developments and with the significant operational experience resulting from the increasing implementation of this modality of ATS provision.

- **Common requirements for service providers and the oversight in ATM/ANS and other ATM network functions** (RMT.0719): Following the publications of Implementing Regulation (EU) No 2017/373 and [ED Decision 2017/001/R](#), EASA released [Easy Access Rules for Regulation \(EU\) No 2017/373](#) on 22nd November 2017 which covers the regulation, its annexes and associated AMC/GM. Furthermore, to facilitate the maintenance of this rule, EASA has launched RMT.0719 ‘Regular update of ATM/ANS rules (IR/AMC/GM)’, for which [ToRs](#) were published on 18th August 2017. EASA continues to support EC on the proposal resulting from the merging of EASA [Opinion 02/2018](#) and [Opinion 03/2018](#). The resulting rule text was presented at the EASA Committee meeting on 27th February 2019 and discussed further at the next meeting on 26th-27th June 2019, for a possible subsequent submission for approval by written procedure for approval. In parallel, EASA continues to elaborate the related AMC/GM accordingly, to be issued following the publication of the Regulation.

EASA also continues to support preparations for a proposal to amend [Regulation \(EU\) 2017/373](#) (CR&O IR) and [Regulation \(EU\) No 923/2012](#) (SERA IR) that will repeal [Regulation \(EU\) No 255/2010](#) (ATFM IR), hence taking into account [Regulation \(EU\) 2019/123](#) (NF IR).

- **Part-MET** - (RMT.0719): EASA, in collaboration with MET experts nominated through the ATM/ANS Advisory Bodies, is also working on an additional regulatory activity through RMT.0719 to propose amendments to PART-MET amendment 78 requirements to better reflect the contents of ICAO Annex 3.

- **Requirements for safety assessment of changes to ATM/ANS functional systems** ([RMT.0469](#), [RMT.0470](#)): Following [NPA 2017-10](#), ED Decision (AMC/GM) on 'Software assurance level (SWAL) requirements for safety assessment of changes to ATM/ANS functional systems' is planned in Q3 2019. It is expected to propose a set of AMC/GM for the definition and implementation of a software (safety) assurance system by providers of ATM/ANS and other ATM network functions. These are based on ([EC](#)) No 482/2008, which is repealed by Regulation (EU) No 2017/373.

EASA has also published [NPA 2019-04](#) to support the existing AMC/GM on safety/safety support assessment of changes to the ATM/ANS functional systems. Based on the SESAR Safety Reference Material, it supports the identification of the scope of the change, the risk analysis process and the safety criteria determination by providers of ATM/ANS. The expiration date for comments on [NPA 2019-04](#) was extended to the 11th July 2019.

- **Part-AIS/AIM - Technical requirements and operational procedures for Aeronautical Information Services (AIS) and Aeronautical Information Management (AIM)** ([RMT.0477](#), [RMT.0478](#)): The review of comments on [NPA 2016-02](#) concluded on 30th June 2017. The draft revised rule text, associated AMC/GM and CRD are included in [Opinion 02/2018](#). The AIS/AIM rules are based on the recently published ICAO Annex 15 / new PANS-AIM proposed amendment No 40 and on Regulation ([EU](#)) No 73/2010 ('ADQ Regulation').

The NPA also proposes rules for service providers, aerodrome operators and for organisations involved in the origination of aeronautical data by amending Annex VI (Part-AIS) to Regulation ([EU](#)) No 2017/373 and Regulation ([EU](#)) No 139/2014 (aerodromes) and its associated AMC/GM. As the relevant data quality requirements are included within the rule package, the NPA proposes to repeal the ADQ Regulation ([EU](#)) No 73/2010. With respect to alignment with the foreseen 8th November 2018 applicability date of ICAO Annex 15 amendment No 40, EASA did not deem it necessary to introduce any amendments to 2nd January 2020 applicability date of Regulation (EU) 2017/373.

- **Part-ATS** - ([RMT.0464](#)): EASA is developing a complete set of Implementing Rules concerning organisation and technical requirements, accompanied by AMC and GM, for the provision of ATS in the context of [Regulation 2017/373](#). The public consultation of [NPA 2016-09](#) was closed on 28th February 2017. The draft [AMC and GM to Part-ATS](#) were published on 8th March 2017. The regulatory proposal following the consultation process was published on 22nd May 2018, as EASA [Opinion 03/2018](#), and a [CRD Appendix 1 to Opinion No 03/2018](#). The amendments made with respect to ATS in [Opinion 03/2018](#) aim to transpose relevant ICAO provisions of ATS into the EU aviation regulatory framework.
- **Technical requirements and operation procedures for airspace design (FPD), including procedures design** ([RMT.0445](#)): The consultation period for [NPA 2016-13](#) expired on 31st March 2017. In preparation for the publication of an Opinion, EASA conducted a focused consultation and held a thematic meeting on 5-6th September 2017. Subsequently, [Opinion 02/2018](#) was published on 22nd May 2018. The amendments proposed in [Opinion 02/2018](#) aim to ensure MS operational models are not drastically affected by imposed airspace structure.
- **Standardised European Rules of the Air (SERA)** ([RMT.0476](#)): To facilitate regular maintenance of the SERA regulation ([EU](#)) No 923/2012 (and amending regulation ([EU](#)) No 2016/1185), EASA initiated RMT.0476 "Regular Update of SERA rule" for which [ToRs](#) were published on 18th August 2017. The first 'regular updates' amendment containing non-controversial modifications were provided to EC, who will take care of the final consultation and publication. The next amendment package of 'regular updates' will follow the schedule published in the [EPAS 2019-2023](#), tackling the transposition of radio communication failure procedures and SID/STAR phraseology.

## SES technical (interoperability) rules

- **PBN IR (RMT.0639)**: EASA assisted the Commission in the development process of the draft PBN IR based on [Opinion 10/2016](#). On 18th July 2018 the Commission published the final rule, [Regulation \(EU\) 2018/1048](#) which lays down airspace usage requirements and operating procedures concerning performance-based navigation and shall apply from 3rd December 2020. Guidance material ([ED Decision 2018/013/R](#)) supporting PBN IR was published on November 2018, addressing issues such as; transition, provision of contingency measures, and design and publication of routes and procedures in accordance with a comprehensive set of technical references.

Additionally, EASA is also preparing to issue an NPA that will update the Certification Specifications for Airborne Communication Navigation and Surveillance (CS-ACNS) to incorporate new certification criteria to support PBN operations.

- **Revision of surveillance performance and interoperability (SPI) (RMT.0679)**: EASA submitted a proposal in the form of a report to the Commission at the end of 2017 to ensure a balanced application of the current surveillance technologies.
- **DLS - Data link services (RMT.0524)**: RMT.0524 was launched to address the regulatory material required to implement PCP AF6, the implementation of multi-frequency DLS on the basis of Model D of the ELSA study, and the specific identified requirement for an 'end-to-end certification and oversight function'. [ToRs](#) for RMT.0524 were published in January 2018. A draft amendment to DLS IR 29/2009 in relation to DLS exemptions was published in Q4 2018 and was available for consultation until 7th March 2019. The amendment to the DLS IR, Commission Implementing [Regulation \(EU\) 2019/1170](#), was published on 8th July 2019.
- **Part-DAT (RMT.0593, RMT.0594)**: [AMC and GM to Part-DAT \(Annex VII to ED Decision 2017/001/R\)](#) were published on 8th March 2017.
- **Evidence-based and competency-based training (RMT.0599)**: Recognising that traditional training processes do not guarantee that pilots are competently trained, EASA have initiated a RMT addressing the initial and recurrent training of flight crew at the European level. NPA 2018-07 (parts [A](#) and [B](#)), concerning evidence-based training (EBT), was published for consultation with Member States on 27th July 2018. The Opinion is expected in Q3 2019.
- **Regulatory framework to accommodate unmanned aircraft systems in the European aviation system (RMT.0230)**: The objectives of this RMT include ensuring high levels of safety for UASs, fostering innovation, harmonising the regulatory framework across Member States, and fostering an operation-centric, proportionate as well as risk and performance based regulatory framework. Technical Opinion '[Introduction of a regulatory framework for the operation of unmanned aircraft](#)', resulting from the consultation [A-NPA 2015-10](#), detailed 27 concrete proposals for a regulatory framework for low-risk operations of unmanned aircraft, providing a starting point and the basis for RMT.0230. [NPA 2017-05](#) on the 'Introduction of a regulatory framework for the operation of drones' was published on 5th May 2017. This NPA proposed to create a new regulation to mitigate the risk of operations for open and specific categories of UAS. EASA organised a workshop on 5th July 2017 to facilitate comments and stakeholder feedback on the NPA. Consultation on the NPA concluded on 15th September 2017 and more than 3,700 comments were received from 215 stakeholders.

A political agreement between the Council, European Commission and the European Parliament on an update to the EASA Basic Regulation that covers all UAS, regardless of their maximum take-off masses, was reached on 22nd December 2017. In line with this and the comments received from NPA 2017-05, EASA published [Opinion 01/2018](#) on 6th February 2018 with a proposed draft regulation ([draft EASA BR](#)) laying down rules and procedures for the operation of unmanned aircraft and its Annexes. The Opinion was submitted to the Commission and subsequently fed into the new EASA BR, [Regulation \(EU\) No 2018/1139](#), which was adopted by the Council on 4th July 2018 and was published on the EU's Official Journal on 22nd August 2018.

## SES technical (interoperability) rules

- **Update on rules and procedures for the operation of unmanned aircraft and on UAS and third-country operators of UAS (RMT.0729):** This ToR was published on 30th July 2019. The objective of this RMT is to allow regular updates to Regulations (EU) 2019/947 and 2019/945 to be issued as experience is gained and the need for improvements, or to resolve a safety issue, are identified.
- **Update of the AMC/GM on rules & procedures for the operation of unmanned aircraft (RMT.0730):** This RMT was published on 30th July 2019 and concerns the regular update to the AMC and GM to Commission Implementing Regulation (EU) 2019/947. The AMC and GM are expected to be issued when relevant data is available following updates to industry standards and feedback from the application of Commission Implementing Regulation (EU) 2019/947 on unmanned aircraft systems (UAS) are received.

## SES Support

- **Development of acceptable means of compliance and guidance material for safety key performance indicators and other safety performance indicators - The ATM Performance Scheme Implementing Regulation (RMT.0723):** The drafting of AMC/GM for the implementation and measurement of the safety key performance indicators (SKPIs) and other safety performance indicators (SPIs) for the RP3 of the Performance scheme is ongoing. EASA have initiated the task through the issuance of the related [ToR](#) and formation of [RMT.0723](#). EASA expects to have completed the necessary material by Q2/2019.

The first amendment is expected to be introduced into the EC proposal resulting from [Opinion 02/2018](#) and [Opinion 03/2018](#). More controversial modifications, concerning the transposition of radio communication failure procedures and SID/STAR phraseology, are being processed following EASA standard procedure. EASA also continues to support preparations for the upcoming High Level Conference on SES, planned for 12th September 2019.

# CONNECTING EUROPE FACILITY (CEF)

## FUTURE CEF TRANSPORT CALLS

[A note](#) was published on the INEA website regarding the state of play of the CEF Transport Programme and the way forward. Key points of the note are:

- The end date of the current CEF Transport programme will be 31 December 2023. The successive programme (CEF 2) will start on 1 January 2021.
- Grant Agreements may be amended to extend their duration for a period of no more than 24 months from their initial set date at the time when first signed.
- Only exceptional and duly justified cases can obtain up to an additional period of 12 months.
- Reflow calls will be introduced in September 2019 to make use of grant amounts that beneficiaries are not able to consume.

## 2018 CEF TRANSPORT CALL

The [2018 CEF Transport call](#) for proposals opened on 17th May 2018. With an indicative budget of €50 million it covers funding objectives and priorities supporting the policy orientations of the 3rd Clean Mobility Package. The focus of financial assistance will thus be on cross-cutting objectives of transport digitalisation, safety and multimodality. SESAR has not been included under this call, but some elements may still be relevant, for example EGNOS.

The submission deadline for the Call passed on 24th October 2018. A decision on the selected projects is expected in February 2019.

## 2017 CEF SESAR CALL

The [2017 CEF Transport SESAR call for proposals](#) opened on 6th October 2017, under the CEF Multi Annual Work Programme (MAP). The Call made €290 million of EU funding available exclusively for proposals addressing the priority ‘Single European Sky – SESAR of the 2017’ of the MAP. Unlike previous Calls, the 2017 SESAR Call was not split between a Cohesion and General Call.

The submission deadline for the Call was 12th April 2018. The decision on selected projects was made public on 16th October 2018, with over €230M granted to the 2017 SESAR Deployment Programme Implementation. The application for this had been coordinated through the SESAR Deployment Manager.

## 2017 CEF BLENDING CALL

The [2017 CEF Blending Call](#) for MAP submissions opened to all Member States on 8th February 2017, with SESAR listed under Funding Objective 3. The Blending Call allows for the combination of grants with financing from the European Fund for Strategic Investments, the European Investment Bank, National Promotional Banks, or private sector investors. The indicative budget for proposals under the SESAR Priority is €40 million. The co-funding limit is set to 50% and 20% for land-based and on-board components, respectively.

The call was split into two cut-off dates; the first cut-off date for submissions was 14th July 2017 and the second cut-off date was 12th April 2018. The decisions for the second cut-off were published on 12th October 2018.

Two proposals were submitted under the SESAR Priority for the first cut-off date, and overall (i.e. including all Priorities) €2.21 billion of funding was requested under the first cut-off date of the Call (well in excess of the indicative overall budget of €1 billion).

## RESULTS OF THE 2016 CEF CALL

On 25th July 2017, the Commission published a [Decision](#) establishing the list of proposals within the Transport sector selected for receiving EU financial assistance under the 2016 CEF Call. A total of €311 million was awarded to projects submitted under the SESAR priority. A list of projects selected to receive CEF Funding in the field of transport was published as an [Annex to the Decision](#), and INEA produced a [brochure](#) on the selected projects under the 2016 CEF Call.

## RESULTS OF 2015 CEF CALL

The results of the 2015 CEF Call were formally approved on 8th July 2016 – a total of €598 million was awarded to projects submitted under the SESAR priority. INEA produced a [brochure](#) on the selected projects under the 2015 CEF Call, which was approved by the Commission.

# SES LEGISLATION

## EXISTING RULES AND REGULATIONS

### Framework Regulation (EC) 549/2004, amended by (EC) 1070/2009

Performance Scheme Regulation [\(EU\) 2019/317](#) (RP3)

### Service Provision Regulation (EC) 550/2004, amended by (EC) 1070/2009

Common Charging Scheme Regulation [\(EU\) 1794/2006](#), amended by [\(EU\) 1191/2010](#) (RP1); [\(EU\) 391/2013](#) (RP2); [\(EU\) 2019/317](#) (RP3) (Performance, above, and Charging schemes have been merged into [\(EU\) 2019/317](#))

FAB Information [\(EU\) 176/2011](#)

### Airspace Regulation (EC) 551/2004, amended by (EC) 1070/2009

ATFM Regulation [\(EU\) 255/2010](#), amended by [\(EU\) 2016/1006](#) and [\(EU\) 2017/2159](#)

FUA Regulation [\(EC\) 2150/2005](#)

Network Functions [\(EC\) 2019/123](#)

### Interoperability Regulation (EC) 1070/2009

COTR Regulation [\(EC\) 1032/2006](#), amended by [\(EC\) 30/2009](#)

IFPL Regulation [\(EC\) 1033/2006](#), amended by [\(EU\) No 428/2013](#), [\(EU\) 2016/2120](#) and [\(EC\) No 1818/139](#)

FMTP Regulation [\(EC\) 633/2007](#), amended by [\(EU\) 283/2011](#)

DLS Implementing Rule [\(EC\) 29/2009](#) and [\(EU\) 441/2014](#) amended by [\(EU\) 2015/310](#). Further amended and corrected by [\(EU\) 2019/1170](#)

Mode S Interrogator Regulation [\(EC\) 262/2009](#), amended by [\(EU\) 2016/2345](#)

ADQ Regulation [\(EU\) 73/2010](#), amended by [\(EU\) No 1029/2014](#)

ACID Implementing Rule [\(EU\) 1206/2011](#)

SPI Implementing Rule [\(EU\) 1207/2011](#), amended by [\(EU\) No 1028/2014](#) and [\(EU\) 2017/386](#)

VCS-2 Regulation [\(EU\) 1079/2012](#) repealing VCS Regulation [\(EC\) 1265/2007](#), amended by [\(EU\) No 657/2013](#), [\(EU\) 2016/2345](#) and [\(EU\) 2017/2160](#)

### Network and Information Security (NIS)

Legislation on cybersecurity [Directive \(EU\) 2016/1148](#)

### EASA ATM Rules

Common Requirements of ATM and ANS [\(EU\) 2017/373](#), repealing [\(EC\) No 482/2008](#), [\(EU\) No 1034/2011](#), [\(EU\) No 1035/2011](#), [\(EU\) 2016/1377](#) and amending [\(EU\) No 677/2011](#)

EASA Basic Regulation [\(EC\) No 2018/1139](#) amending [\(EC\) No 2111/2005](#), [\(EC\) No 1008/2008](#), [\(EU\) No 996/2010](#), [\(EU\) No 376/2014](#) and Directives [2014/30/EU](#) and [2014/53/EU](#) and repealing [\(EC\) No 216/2008](#), [\(EC\) No 552/2004](#) and [\(EEC\) No 3922/91](#)

ATCO Licence [\(EU\) 2015/340](#), repealing [\(EU\) 805/2011](#) and [Directive 2006/23/EC](#). An [Easy Access Guide](#) for the regulation is available

Standardised European Rules of the Air [\(EU\) 923/2012](#), amended by [\(EU\) 2016/1185](#)

Rules on unmanned aircraft systems and third country operators of unmanned aircraft [\(EC\) 2019/945](#)

Rules on operation of unmanned aircraft [\(EC\) 2019/947](#)

### SESAR

SESAR JU Regulation [\(EC\) 219/2007](#), amended by [\(EU\) No 721/2014](#)

SESAR SJU Horizon 2020 Regulation [\(EU\) 1291/2013](#)

SESAR Deployment framework Regulation [\(EC\) 409/2013](#)

Pilot Common Project [\(EU\) No 716/2014](#)

**Table 8: Existing Rules and Regulations**

# COMMUNITY SPECIFICATIONS

Developed by ESOs	
Airport Collaborative Decision Making (A-CDM)	<a href="#">EN 303 212 V1.1.1</a>
Advanced Surface Movement Guidance and Control System (A-SMGCS)	<a href="#">EN 303 212 V1.1.1</a>
Advanced Surface Movement Guidance and Control System (A-SMGCS)	<a href="#">EN 303 213-1 V1.4.1</a> <a href="#">EN 303 213-2 V1.4.1</a> <a href="#">EN 303 213-3 V1.1.1</a> <a href="#">Draft EN 303 213-3 V1.2.0</a> <a href="#">EN 303 213-4-1</a> <a href="#">EN 303 213-4.2 V1.1.1</a> <a href="#">EN 303 213-5 / <a href="#">EN 303 213-6</a> published under R&amp;TTE Directive</a>
Data Link Services (DLS)	<a href="#">EN 303 214 V1.2.1</a>
Developed by Eurocontrol*	
Flight Message Transfer Protocol (FMTP)	<a href="#">Spec-0100 Ed. 2.0</a>
Time Based Separation (TBS) support tool for Final Approach	<a href="#">Spec-167 Ed. 1.0</a>
Initial Flight Plan System (IFPL)	<a href="#">Spec-0101 Ed. 1.3</a>
ATS Data Exchange Presentation (ADEXP)	<a href="#">Spec-0107 Ed. 3.2</a>
Flexible Use of Airspace (FUA)	<a href="#">Spec-0112 Ed. 1.1</a>
Air-Traffic Services Message Handling System (AMHS)	<a href="#">Spec-0136 Ed. 2.1</a>
On-Line Data Interchange (OLDI)	<a href="#">Spec-0106 Ed. 4.3</a>
A-SMGCS Services	<a href="#">Spec-171 Ed. 1.0</a>
Draft for ANS Performance Monitoring – Airport Operator Data Flow	<a href="#">Spec-175 Ed. 1.0</a>
Published as Technical Specifications	
FDP Interoperability (ATC-ATC)	<a href="#">CEN TS 16071</a>
Software Assurance Levels (SWAL)	<a href="#">CEN TS 16501</a>
On-going Community Specifications	
GBAS Cat I; APV-SBAS (LPV)	Suspended ( <a href="#">M/408</a> , mandated to CEN, CENELEC, ETSI)
ATM interoperability for the ATM Master Plan	<a href="#">Suspended (M/524</a> , mandated to CEN, CENELEC, ETSI)
Aerodrome Mapping Data	Suspended ( <a href="#">M/510</a> , mandated to CEN, CENELEC, ETSI)

**Table 9: Community Specifications**

\* Eurocontrol links are subject to change as the Eurocontrol website platform is being updated



Produced for the European Commission (September 2019)

For further information please visit: | [www.eghd-portal.eu](http://www.eghd-portal.eu) | [www.icb-portal.eu](http://www.icb-portal.eu) | [www.ncp-portal.eu](http://www.ncp-portal.eu)

