



INTRODUCTION



INTRODUCTION

The Air Traffic Management (ATM) Information Digest provides ICB, NCP and EGHD members with a quick reference 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 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, including information on the 2017 CEF Transport SESAR Call for Proposals.

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

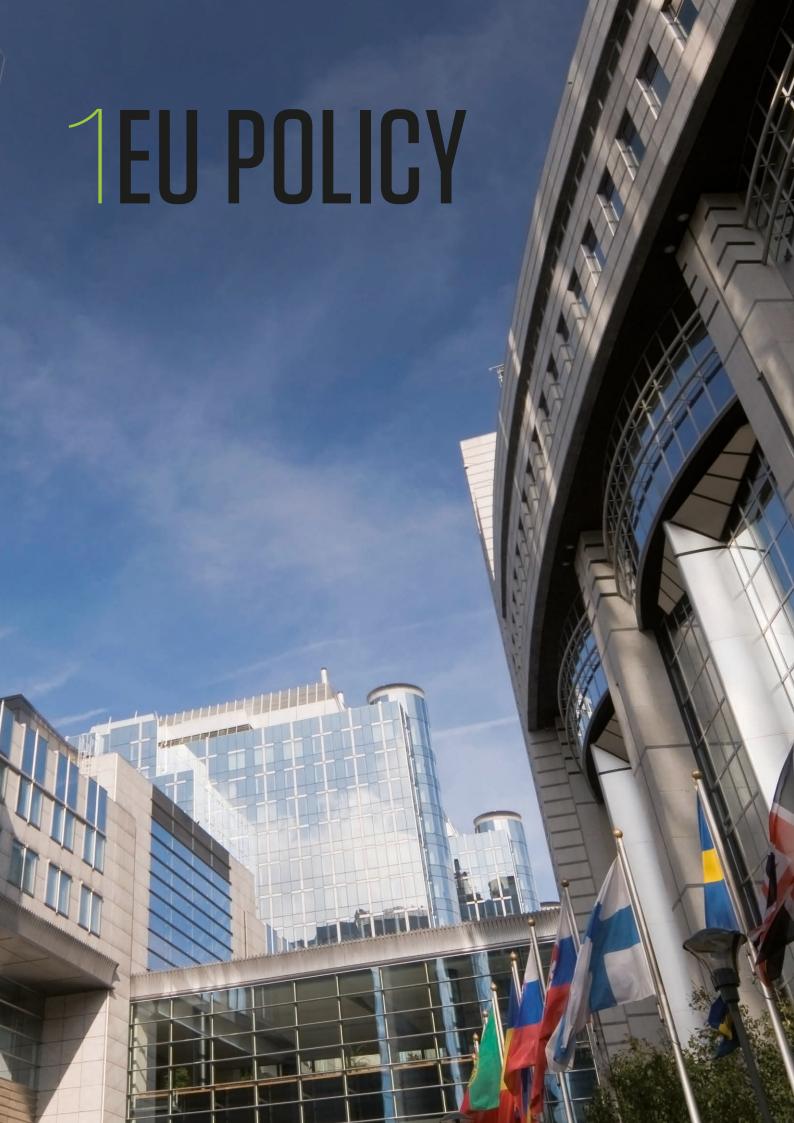
- Human factors: An overview of the status of work on human factors within SESAR.
- EU-US Collaboration in ATM Modernisation: An outline of FAA's NextGen (Next Generation
 Air Transportation System) and the EU's SESAR collaboration activities that aim to harmonise ATM
 modernisation efforts.

4 SAFETY

- Common requirements for service providers and their Oversight: A summary of the subject regulation and EASA Rulemaking activity;
- Update to 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 2017: An overview of the Annual Safety Review 2017.

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 Commission Expert Groups;
- Public Consultations: Provides a list of on-going and planned public consultations related to Air Transport;
- On-going Legislative Procedures: 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 procedure 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.



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 (ATM) policy;
- Funding and Financing: A summary of the funding and financing opportunities within European ATM, iwncluding information on the selection decision for the 2017 CEF Transport SESAR call for proposals;
- 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 (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).



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:

- A 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.
- A 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

Following the Commission's Aviation Strategy, a three-phase process for proposing, negotiating and implementing EU-level comprehensive aviation agreements with partner countries has been undertaken. The EU is currently in negotiations with the following key countries:

- 1 March 2016 EU Council authorised the Commission to open negotiations with China and Japan in view of concluding Bilateral Air Safety Agreements (BASAs);
- 2 June 2016 EU Member States granted the Commission to negotiate EU-level aviation agreements with four key partners: The United Arab Emirates (UAE), Qatar, Turkey and members of the Association of South East Asian Nations (ASEAN);
- 3 A European Common Aviation Area (ECAA) with neighbour EU States has been initiated. An aviation agreement with Ukraine is expected to be signed in the near future, while negotiations are on-going with Lebanon, Tunisia and Azerbaijan.

Existing EU aviation comprehensive agreements are listed below:

- EU-US Air Transport Agreement, (2007), amended by a Protocol;
- EU-Canada Air Transport Agreement (2009); and
- Multilateral Agreement on the establishment of a European Common Aviation Area (2006), which entered into force on 1st December 2017.

A list of all countries that the Commission has Air Transport agreements with, or is currently in negotiations with, is on the Commission's Directorate-General of Mobility and Transport website.

FASA

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:

- 1 Revise SES High Level Goals (HLGs)
- 2 Analyse other policy options targeting defragmentation
- 3 Ensure full independence and capacity of NSAs from ANSPs and cover the inspection gap at the level of the Charging Scheme
- 4 Streamline the Performance Scheme, and review certain key performance indicators
- 5 Review the EU's support structure to R&D with regard to its objectives
- 6 Reinforce the accountability of the SESAR Joint Undertaking (SJU)
- 7 Prioritise EU support to R&D solutions that encourage a defragmented and competitive environment

Information on the audit methodology used by the ECA can be found here.

It was announced on 24th April 2018 that the deployment of SESAR, which was not covered under the original audit of the SES, is currently undergoing its own audit by the ECA. This will focus on the deployment's management and contribution to the SES initiative. A Special Report is planned to be released in Spring 2019.

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 process continues to be blocked in the Council, pending the resolution of the disputed status of Gibraltar.

WISE PERSONS GROUP

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 aims 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. A first hearing with ANSPs and Airspace Users took place on 20th November 2018, followed by a second hearing with airports and Professional Staff Organisations (PSOs) on 11th December 2018.

Following these hearings, the WPG will meet to discuss the initial draft report on 1st February 2019 before a final report is published in April 2019.

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. Three preliminary recommendations from the study followed:

- 1 Launch airspace re-configuration supported by an Operational Excellence programme to achieve quick wins Member states, Network Manager, ANSPs, civil airspace users and military to work together to define and implement an optional cross-FIR and flow-centric redesign of airspace sectors.
- 2 Realise virtual de-fragmentation of European skies the Commission to review policy options which could effectively deliver defragmentation and continue to support the timely delivery of SESAR solutions.
- 3 Create a SES framework that rewards early movers the Commission to review its incentivisation policy to reward actors who are the first to implement the high-level milestones identified in the proposed transition strategy.

A summary of the second workshop was published on 27th November 2018.



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. INEA has launched three related Calls for Proposals: 2014, 2015 and 2016. Links to the results of the 2015 and 2016 CEF Transport Calls can be found in Table 1 of the Useful Resources.

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	2014 Decision
2015 (General)	€515 M	€473 M (value of funding applied for: €1 076 M)	€123 M (value of funding applied for: €140 M)	2015 Decision
2015 (Cohesion)	€300 M	€59 M (value of funding applied for: €112 M)	€39 M (value of funding applied for: €40 M)	2015 Decision
2016 (General)	€300 M	€275 M (value of funding applied for: €240 M)	€25 M (value of funding applied for: €60 M)	2016 Decision
2016 (Cohesion)	€100 M	€8.6 M (value of funding applied for: €80 M)	€3.0 M (value of funding applied for: €20 M)	2016 Decision
2017 (SESAR)	€290 M	N/A	N/A	2017 Decision

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

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. Priority for the first cut cut-off date.

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.

On 13th September 2017, the European Parliament and Member States agreed to extend EFSI's initial three year timeline to 2020 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.

The Single European Sky (SES) Awards have re-opened applications for 2019. This edition of the contest will have five award categories:

- Network Performance Improvement;
- Innovation;
- Sustainability;
- · Cooperation; and
- Single European Sky Excellence.

The deadline for application submission is 31st January 2019. The Award ceremony will be held on 12th March 2019 at the 2019 World ATM Conference in Madrid.



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 are set at EU, FAB, charging zone and national level.

The Performance and Charging scheme mandates used in RP2 are coming to an end in 2019. The Commission is currently in the process of ratifying the Performance and Charging scheme regulation for RP3 that will commence at the beginning of 2020. Important preparation in 2019 will be the adoption of EU wide targets and development of Member States' performance plans for RP3. 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 and was one of the influencing factors in the revision of the Performance and Charging Scheme Regulations for RP3.

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 EU-wide targets for RP2.

Following the rejection 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 were adopted in 2017.

The decision on the consistency of the BlueMed FABs revised performance plan with the Performance and Charging Regulations - specifically regarding the capacity KPA - is ongoing.

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



RP2 unit rates - 2019

The following Commission Implementing Decisions were adopted on 8th May 2018:

- (EU) 2018/704, on the compliance of en-route unit rates for Member States' charging zones for 2018 and for FABEC charging zones for 2015 and 2016; and
- (EU) 2018/703, on the compliance of the unit rates for the charging zone of Switzerland for 2015, 2016 and 2018.

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 will decrease by 1.6% to €7.2 Billion, whilst average forecasted inflation is 2.2%. There will be an overall increase in service units of 4.8% to 154 million and consequently, the average unit rate will decrease by 6.1% to €46.75.

PRB Annual Monitoring

The PRB annual RP2 monitoring report for 2017 was published in November 2018 on the ESSKY Portal¹ 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 20181.

PREPARATIONS FOR REFERENCE PERIOD 3 (2020-2024)

The main developments since the beginning of 2017 relating to the preparations for RP3 of the Performance and Charging Schemes are presented in the table below:

Date	Development		
September 2018	The PRB released its report "PRB Advice to the Commission in the setting of Union-wide performance targets for RP3" which sets out the PRB's recommendations to the Commission on Targets for RP3. The report was published on the SES Performance website on 5 October 2018.		
October 2018	An ad-hoc SSC meeting was held on 3rd October to discuss the new draft of the RP3 Performance and Charging Regulation.		
November 2018	SSC/70 was held on 27th - 28th November and was intended to include a vote on the draft RP3 Performance and Charging Regulation. The Commission decided to postpone the vote to allow additional MS comments to be included in the text.		
December 2018	A vote on the revised RP3 regulation was held during an ad-hoc SSC on 17th December. Following some additional changes on the drafting, the committee delivered a positive opinion. The chair then presented the intended process and timeline for the discussion on the target setting for RP3.		
January 2019	The PRB workshop "Stakeholder workshop on the PRB advice on EU-wide RP3 targets" was held on 16th January 2019. During this meeting, Member States and stakeholders were invited to ask questions to the PRB regarding EU-wide targets. This follows from the PRB advice on Union-wide performance targets for RP3 published in October 2018.		

Table 2: Recent developments in the preparations for RP3

¹To access the documents, you must have an EU Login Account. A Login Account can be created at the following link.

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.

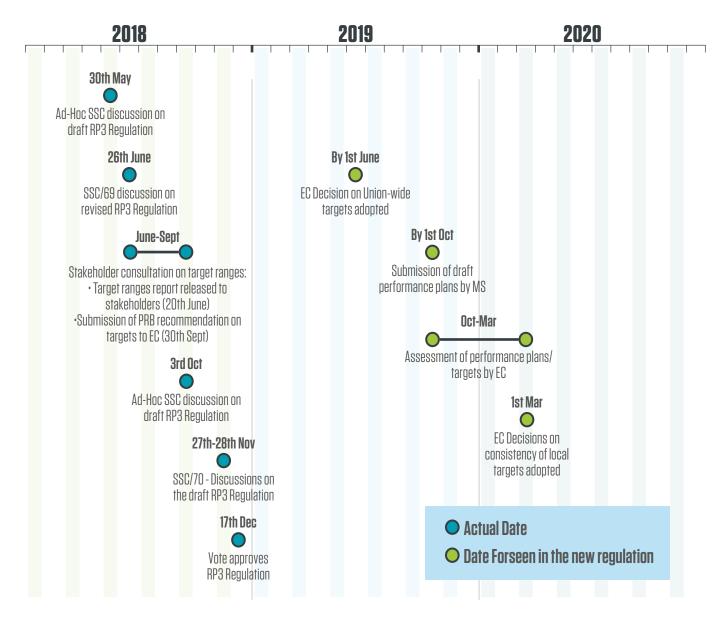


Figure 1: Timeline for Reference Period 3 Implementation and Execution

In addition to the dates shown in the diagram above it should be noted that, after the adoption of the updated regulation by the EC, a decision on the consistency of local targets will be made 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.
- For States 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, publication and adoption of the performance plan by the member state 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 set up the group of experts designated as the PRB of the SES. The PRB assists the Commission in regulating ANSPs by providing independent advice to improve the performance of ANS across the four KPAs.

The new PRB members were appointed on 1st June 2017, with the Director General of DG MOVE asking Professor Regula Dettling-Ott to assume the role of Chair. The new PRB started its activities in June 2017.

The PRB receives technical support from an independent group of external companies and Eurocontrol & EASA continue to provide performance data to the PRB.

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 (including latest Decisions)

Quarterly monitoring of performance indicators

A PRB section, updated by the PRB and containing PRB Reports

Information on all SES performance-related events

• 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



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 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.

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. 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.

SUMMARY OF NETWORK PERFORMANCE

The Network Management Board (NMB) adopted the 2017 NM Annual Report in April 2018. This report gives an overview of the recent activities performed in the context of the Network Performance Plan (NPP). The key findings across the network in 2017 were as follows:

- Network traffic increased by 4.4% and reached an all-time record of 10.6 million flights, surpassing 2016 levels. The months of July August and September had the highest monthly traffic ever recorded, each totalling more than one million flights. The busiest day was the 30th June with 35,937 flights.
- Airlines reported a delay (all causes) of 12.31 minutes per flight, an increase of 9% compared to 2016.
- The en-route ATFM delay was 0.88 min/flight, an increase of 4% compared to 2016. A large number of en-route weather events combined with capacity and staffing issues accounted for much of the delay in 2017.
- Industrial action contributed to 8.5% of total en-route delay in 2017. There were roughly 800,000 minutes of delay attributed to strikes, a decrease of 33% compared to 2016.
- NM delivered absolute en-route ATFM delay savings of 14% through individual flight improvements, above its commitment in the Network Performance Plan (NPP).
- Flight efficiency performance improved during 2017. The actual trajectory indicator (KEA) improved and is now under the 2.78% target (NM and SES).



UPDATE OF NETWORK FUNCTIONS IR FOR RP3

In 2015, the Commission conducted an independent assessment of the effectiveness of the NM. An ex-post evaluation of the impact of the network functions, including an evaluation of NM effectiveness, has been performed by a consortium led by BIP, having commenced in January 2017.

Indicative NF IR proposals were submitted by the Commission at SSC/66 in October 2017, and an ad-hoc SSC Working Group meeting on Network Functions was held on 13th November 2017 to discuss key issues identified in the proposals. The conclusions of the ad-hoc SSC Working Group were presented at SSC/67 on 12th/13th December 2017.

At an ad-hoc SSC meeting on 25th April 2018 (summary report available here) the Commission presented a draft version of the NF IR. Proposals for amendments were suggested by members, for consideration by the Commission in conjunction with their legal service.

An updated version of the NF IR was presented at SSC/69, on 26th - 27th June 2018 (summary report available here). The SSC recognised the progress made; however, as several issues with the text remained, the vote on the draft NF IR was postponed until the ad-hoc SSC on 3rd October 2018.

A draft of the Network Functions Implementing Regulation was released on 23rd October 2018 to allow States to provide comments prior to SSC/70 on 27th – 28th November 2018. The NF IR received a positive vote at SSC/70 and has been subsequently adopted by the Commission on 24 January 2019.

NETWORK MANAGER

Nomination of NM for RP3

The position of NM is currently held by Eurocontrol, who were nominated by the Commission in July 2011 and runs until the end of RP2 (31st December 2019). An input paper on the state of play of the nomination of the NM was put forward at SSC/66 in October 2016 as an initial step towards drafting a Commission Decision on the designation of the role for post-2019.

A first version of the Commission Implementing Decision on the appointment of the Network Manager for ATM network functions was presented at SSC/69 for comment on 26th - 27th June 2018 (summary report available here). At SSC/70, the next steps in the process of appointing an NM were defined which included a consultation of the Committee under the advisory procedure on the NM appointment decision.

Appointment of new NM Director

The process for appointing the new Director of the NM has been initiated.



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 Deployments**: 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;
- Human factors: An overview of the status of work on Human Factors within SESAR; and
- EU-US Collaboration in ATM Modernisation: An outline of FAA'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.

An Implementation Plan is revised every year as part of the 'Implementation view' (Level 3) of the EU ATM Master Plan. The 2017 Edition details the outcomes of SESAR 1 and proposes new Implementation Objectives for mature SESAR Solutions.

The updated campaign for the European ATM Master Plan was launched in Tallinn on 8th November 2017. The campaign will address the:

- challenges and opportunities presented in a new digital era of aviation,
- role of SESAR in driving the digitalisation agenda forward; and
- synergies between the European ATM Master Plan and the EU's Aviation strategy.

European aviation stakeholders publicly committed to SESAR and the digitalisation agenda by signing a joint industry declaration on 7th November 2017.

A drone addendum to the ATM Master Plan was published on the 21st March 2018. The addendum includes sections on the safe integration of drones, an operational and deployment view, a business view and risk management. U-space services are addressed in the Annex of the addendum.

An ECAC Expert Workshop on European ATM Master Plan Update Campaign 2018 was held on 12th April 2018 which presented the priorities for the 2018 update, the links to the PCP review, the proposal for an additional CP and the Airspace Architecture Study, and a series of deployment scenarios upon which the update would be based.

The SJU plan to formally deliver the updated EU ATM Master Plan by March 2019.

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 U ndertaking (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 2017-2019 outlines the roadmap for the implementation of SESAR 2020 and its contribution to the SES objectives.

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 Call for proposals for SESAR 2020 ER projects, under the umbrella of the Horizon 2020 Research Framework Programme	Mar 2015	Jun 2015	28 projects were selected for €20.4 million of EU funding, which will run until 2018.
Exploratory Research call - RPAS (Remotely Piloted Aircraft Systems)	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.
SESAR 2020 ER projects and VLD activities	Dec 2016	May 2017	Budget of €28 million. 35 of the 63 projects submitted were evaluated to be 'above threshold'.
Call for Proposals for VLD Geofencing	Sept 2017	Nov 2017	Total budget earmarked for the co-financing of projects was estimated at €0.5 million.

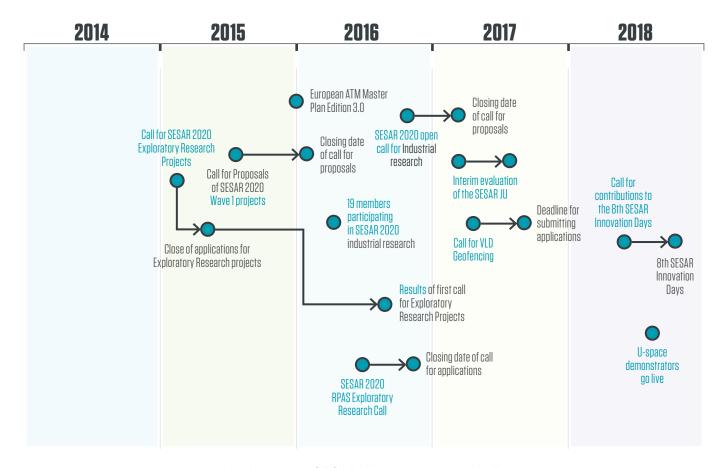
Table 3 - Calls for proposals under SESAR 2020 Wave 1

In addition, on 7th May 2018, SJU launched 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

The second Call for Proposals for SESAR JU members – Wave 2 – is expected to be released in early 2019 and will cover the period 2019-2021. The estimated budget for the Industrial Research and Validation (IR) and Very Large-Scale Demonstration (VLD) activities of SESAR 2020 Wave 2 is €313 million bringing the overall budget for Wave 1 and Wave 2 to a total of €398 million.

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



Interim evaluation of the SESAR JU operating under Horizon 2020

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 (EEU 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). The earliest this is expected is June 2019. The SDM will also perform a new CBA on the revised PCP.



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 DGMOVE 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, NSA, ESA 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 2017 Monitoring View, released on 20th December 2017, provides an overview of the current implementation status of the PCP within Europe.
- The Planning View 2017 Planning View, released on 20th December 2017, 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. The 2018 Planning View was delivered to the EC in September 2018.

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 'VDLM2 – Measurement Analysis and Simulation Campaign (ELSA study)', was 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 has been completed. 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.

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 November 2017, in Brussels, to provide a technical and regulatory update on the implementation of DLS. The next DLS workshop will be held on 17th January 2019 in Brussels and will cover the current status and discuss next steps.

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.

INTEROPERABILITY

IMPLEMENTING RULES

The Commission is 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').

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) 386/2017, 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 Commission held a workshop on the implementation of Regulation (EU) No 1207/2011 on 4th July 2018. 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 SDM is in the process of defining an implementation plan to ensure the 7th June 2020 deadline can be met.

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 13-14 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 (5th February 2018) has now passed, and the airborne implementation deadline is 5th February 2020. Additionally, 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.

In January 2017 EASA was mandated to review the exemptions criteria for DLS, with the final report containing EASA's proposal for DLS exemptions 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. The drafting of the exemption criteria amendment is currently in progress by a newly appointed legal team.

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 it's ToRs were released on the 29 January 2018. The launch meeting of the RMT was held in January 2018 and a Notice of Proposed Amendment (NPA) was planned for Q4 2018, to be followed by an Opinion proposing to amend the DLS Regulation in Q2 2019, however the NPA document is yet to be released.

On 3rd October 2018, EUROCAE published the ED-92C standard with 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. For more details, see the Status of EASA Rulemaking Activities section of the Useful Resources.

Included as an Annex to this Opinion was the draft Commission Implementing Regulation (CIR) laying down implementing rules for common airspace usage requirements and operating procedures, repealing Commission Regulation (EU) No 1332/2011. Subpart PBN of the Annex establishes the specific requirements for the introduction of PBN, which shall apply from 6th December 2018 and which ANSPs, aerodrome operators, the NM and EASA must comply with.

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.

EASA is progressing with the completion of the AMC/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

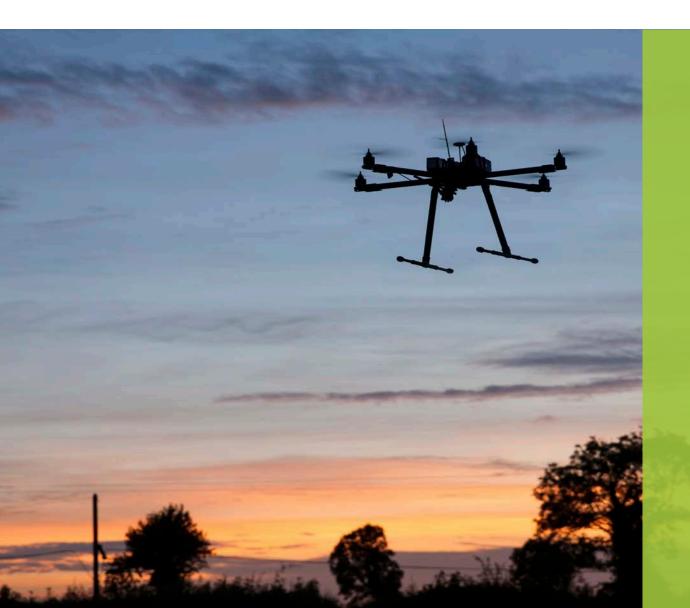
The revised EASA Basic Regulation (2018/1139) incorporates rules for interoperability, repealing and replacing the SES Interoperability Regulation (552/2004). Certain articles of 552/2004, including Article 5, "EC declaration of conformity or suitability for use of constituents", will stay applicable 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

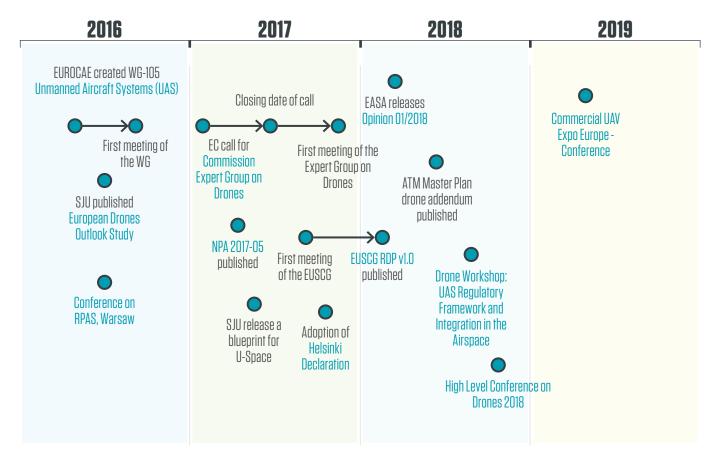
The European ATM Standards Coordination Group (EASCG) was created in 2015 to coordinate ATM-related standardisation activities that arise from the European ATM Master Plan, in support of SES implementation.

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 (V5) was published on 22nd February 2018.



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.



Regulatory framework

REGULATORY FRAMEWORK

A-NPA 2015-10 consultation by EASA resulted in the publication of an Opinion of a technical nature on the introduction of a regulatory framework for the operation of unmanned aircraft on 18th December 2015.

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.

On 6th February 2018, EASA released Opinion 01/2018, which aims to provide a new regulatory framework defining the safe operation of UAS in the 'open' and 'specific' categories. The opinion includes a draft version of the following:

- A draft Commission Regulation laying down rules and procedures for the operation of unmanned aircraft, which is expected to be adopted by the end of 2018;
- A draft Annex to the above draft regulation; and
- A draft Commission Delegated Regulation on making available the market of unmanned aircraft along with its Annex;

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 Rulemaking Development Plan (RDP), V1.0, was published on 17th February 2018. 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 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.

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

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.

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.

Network and Information Security (NIS) Directive

The Network and Information Security (NIS) Directive (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. Member States had until May 2018 to transpose the requirements into their national laws and inform operators of essential services by November 2018. Progress is ongoing.

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 is due for release during the first half of 2019.



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 is also establishing a European Centre for Cyber Security in Aviation (ECCSA) which is currently in its pilot phase and comprised of start-up body members. This will primarily be 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. WG-72 is currently working on the development of ED-205 ('Security Certification/Declaration of Air Traffic Management/Air Navigation Services (ATM/ANS) Ground Systems Process Standard').

The European cybersecurity standardisation coordination group (ECSCG) met on 23rd January 2019 and agreed on an RDP listing of all standardisation activities related to cybersecurity in aviation.

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 Q1 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.
- 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, held in Lisbon on 23rd January 2019.

Additionally, 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 European Union Agency for Network and Information Security (ENISA) held the First Transport Cybersecurity Conference in Lisbon on the 23rd January 2019. The Conference was supported by the European Commission (DG MOVE), the European Union Aviation Safety Agency (EASA), the European Maritime Safety Agency (EMSA) and the EU Agency for Railways (ERA). A 170 private and public representatives from all modes of transport in Europe participated. Discussions focussed on the EU legal framework for cybersecurity, its relevance to the transport sector and the potential for further cooperation between industries. 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. Human Performance tasks will be undertaken by SESAR 2020 projects for each of the E-OCVM (European Operational Concept Validation Methodology) maturity phases and Technology Readiness Levels (TRLs).

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.

The membership of the group consists of the organisations that were members or observers of the now-disbanded consultative expert group on the social dimension of the SES.

In 2018, the EGHD submitted three position papers to the Commission covering the following topics: proposed changes to RP3 Performance and Charging schemes; the impact of Remotely Piloted Aircraft Systems on the human dimension; and optimising ATM staff working stations in the joint human-machine system."



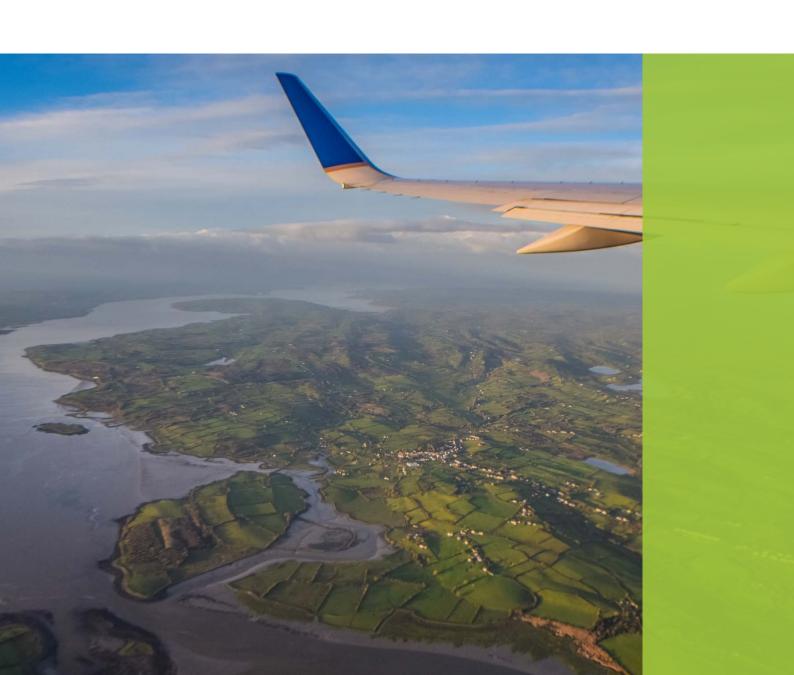
EU-US COLLABORATION IN ATM MODERNISATION

The FAA'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 September 2016, the latest report on the US/EU comparison of Air Traffic Management - Related Operational Performance was released. The report is the fifth 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 life cycle of ATM modernisation activities, and the US-EU Aviation Safety Agreement.





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 2018: An overview of the Annual Safety Review 2018.

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 2017 and the EASA Single Programming Document (SPD) 2018-2020 (which includes EASA's Work Programme for 2018).

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

Following EASA's Opinion 01/2015, the European Commission policy initiative on aviation safety and a possible revision of Regulation (EC) No 216/2008, the Commission produced a Proposal for the revised EASA Basic Regulation text in Q4 2015.

The Proposal went through an ordinary legislative procedure. Inter-institutional negotiations led to a provisional agreement between the Council and Parliament on 29th November 2017, which was endorsed by the Permanent Representatives Committee on 22nd December 2017. The agreed text was then formally approved first by the Parliament and then by the Council.

The final proposal 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 agreed 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) 2018-2022, including the Rulemaking and Safety Promotion Programme (RMP) was published on 14th November 2017. For this edition, the EPAS and RMP have been combined into a single document, providing a comprehensive vision of how EASA intends to improve safety and the environmental performance of the aviation sector (safety/environment driver), to support fair competition and free movement of persons and services (level playing field driver), and to support business, technological development and competitiveness (efficiency/proportionality driver).

The 2018-2022 edition of the EPAS also focuses on a regional approach to safety, capacity and efficiency improvements; materialises EASA's ambition for a 'cool-down' of the rulemaking output already set up in the previous edition (reducing the number of Opinions over the next five years compared to the previous years); and provides a full review of research actions, resulting in the incorporation of new research projects.

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.

EASA ANNUAL SAFETY REVIEW 2018

The EASA Annual Safety Review 2018 was published on 17th August 2018. 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 current EPAS edition covers the five year period from 2018 to 2022 (EPAS 2018-2022) and focuses on Systemic issues, Operational issues and Emerging issues.

The States' implementation report for EPAS 2017-2021 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.



USEFUL RESOURCES

Strategy Documents	Date of Publication
European Network Operations Plan	June 2018
European ATM Master Plan – Roadmap for the safe integration of drones into all classes of airspace	March 2018
European ATM Master Plan Level 3, 2018 Implementation Plan	August 2018
European ATM Master Plan Level 3, 2018 Implementation Report	September 2018 ²
Aviation Strategy for Europe	December 2015
Network Strategy Plan 2015 to 2019	March 2015
Network Operational Concept 2019	March 2015
ATM Performance and Benchmarking	
CODA 2017 Annual Digest	May 2018
Annual Network Operations Report 2017	April 2018
Network Operations Report – September 2018	September 2018
Monthly CODA Reports	Latest: November 2018
CANSO Global ANS Performance Report 2018: ANSP View	December 2018
CANSO Global ANS Performance Report 2018: Executive Summary	December 2018
PRB Publications	
PRB Performance Dashboard	Monthly Updates
Impact assessment of options for regulatory approach in RP3 of the SES Performance and Charging Schemes	February 2018
PRB Annual Monitoring Report 2016³, available in three Volumes: Volume 1 - European overview; Volume 2 - Local overview; and Volume 3 - Safety	December 2017
U.S./Europe comparison of ANS cost-efficiency trends 2006-2014	November 2016
U.S./Europe comparison of ATM Operational Performance 2015	August 2016
PRB RP2 Union-wide Targets Final Report	September 2013
Safety	
ICAO Safety Report 2018	August 2018
EASA Annual Safety Review 2018	August 2018
The European Plan for Aviation Safety (EPAS) 2018-2022	April 2018
SRC Annual Safety Report 2017	January 2018
Global Aviation Safety Plan (ICAO) 2017-2019	December 2016
EASA Practices for risk-based oversight (RBO)	November 2016

 $^{^{\}rm 2}$ Approved by the SJU in September 2018

³ 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
STATFOR Industry Monitor	Latest: September 2018
STATFOR Seven-Year Forecast 2018 to 2024	September 2018
STATFOR Intermediate Two-Year Forecast 2017-2018	September 2018
STATFOR 20-year Forecast 2012 to 2035	June 2013
STATFOR Very Long-Term Forecast 2018 to 2040	June 2018
SES Compliance	
EPRS Briefing on Interim evaluation of Horizon 2020	March 2018
EPRS Briefing on Public-Private Partnerships in Research	May 2017
LSSIP State Reports	2018
ESSIP Plan 2015 Edition	January 2016
ESSIP Report 2014	June 2015
SESAR JU and SESAR Deployment	
SESAR Deployment Programme 2018 – approved by the Commission (complemented by SDM Monitoring view, and SDM Planning view and Annexes)	December 2018
Digitalising Europe's aviation infrastructure	November 2017
Final evaluation of the SJU operating under the SESAR 1 Programme	October 2017
Interim evaluation of the SJU operating under Horizon 2020	October 2017
SESAR Solutions Catalogue	June 2017
SJU Consolidated Annual Activity Report 2017	June 2018
European Drones Outlook Study	November 2016
SESAR Joint Undertaking Single Programming Document (2017 - 2019)	December 2016
NextGen-SESAR: State of Harmonisation	September 2018
SESAR 2020 Multi-Annual Work Programme	July 2015
Other Documents	
Challenges of Growth 2018	July 2018
ECA: Single European Sky: A changed culture but not a single sky	November 2017
NextGen Priorities 2017 Joint Implementation Plan Update	October 2017
NextGen Priorities Joint Implementation Plan, 2017-2019	October 2016
EASA: UAS Safety Risk Portfolio and Analysis	October 2016
TRAN Committee: Safe integration of drones into airspace	September 2016
ECA: The Future of Flying in a Single European Sky	2015

Table 4: Useful Resources

COMITOLOGY 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.

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 July 2018) closed and/or had their results published.

Consultation period: 20/06/2018 – 04/09/2018
Consultation period: 22/02/2018 – 30/04/2018 Decision: ED Decision 2018/013/R
Consultation period: 26/11/2018 – 12/01/2019
Consultation period: 26/11/2018 – 12/01/2019

Table 5: Public Consultations

ON-GOING LEGISLATION

SINGLE SKY COMMITTEE

1 Recently approved Commission Implementing Regulation	ons and Decisions	
Compliance of unit rates		
Commission Implementing Regulation (EU) 2018/704	Adopted on 8th May 2018	
Commission Implementing Regulation (EU) 2018/703	A	
Commission Implementing Regulation (EU) 2017/2378 Commission Implementing Regulation (EU) 2017/2390	Adopted on 15th December 2017	
Consistency of performance targets		
Commission Implementing Decision (EU) 2018/2021 Commission Implementing Decision (EU) 2017/2376	Adopted on 15th November 2018 Adopted on 31st October 2017	
Commission Implementing Decision (EU) 2017/2576 Commission Implementing Decision (EU) 2017/553	Adopted on 13th February 2017	
Commission Implementing Decision (EU) 2017/552	Adopted on 13th February 2017	
Consistency of performance targets	Adopted on 15th November 2018	
Commission Implementing Decision (EU) 2018/1782	Adopted on 31st October 2017	
Commission Implementing Decision (EU) 2017/1985	Adopted on 13th February 2017	
Commission Implementing Decision (EU) 2017/259	Adopted on 13th February 2017	
Commission Implementing Decision (EU) 2017/258	August 2016	
References to ICAO provisions		
Commission Implementing Regulation (EU) 2018/139 (amending Regulation (EU) No 1033/2006)	Adopted on 19th February 2018	
Commission Implementing Regulation (EU) 2017/2159 (amending Regulation (EU) No 255/2010)		
Commission Implementing Regulation (EU) 2017/2160 (amending Regulation (EU) No 1079/2012)	Adopted on 20th November 2017	
Surveillance Performance and Interoperability		
Commission Implementing Regulation (EU) 2017/386 (amending CIR (EU) No 1207/2011)	Adopted on 6th March 2017	
Common Requirements and Oversight		
Commission Implementing Regulation (EU) 2017/373 (Amending Regulation (EU) No 1034/2011 and Regulation (EU) No 1035/2011, and repealing (EC) No 482/2008)	Adopted on 1st March 2017	
PBN IR		
Commission Implementing Regulation (EU) 2018/1048 (Amending Implementing Regulation (EU) No 1332/2011)	Adopted on 18th July 2018	
3 Decision made, awaiting release		
Performance and Charging Schemes	Revised draft was presented at the adhoc-SSC in December 2018. The updated regulation received a positive vote during the meeting.	
Network Functions IR	Revised draft presented to SSC in November 2018 and received a positive vote during the meeting.	
4 Expected Proposals (more details can be found in the S	tatus of EASA rulemaking activities	
Surveillance Performance and Interoperability	EASA submitted a proposal to amend Regulation (EU) No 1207/2011 in the form of a report to the Commission in 2017.	

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		
Common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency	COM (2015)0613 2015/0277(COD)	Text adopted by Parliament on 12/06/2018 (new EASA BR)		
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 has initiated RMT.0668 "Regular update of ATCO licencing rules", for which ToRs were published on 10th August 2017. In line with the published ToRs, EASA regulatory actions were formally launched through the 1st focused thematic meeting with affected stakeholders (30/31 October 2018). This event aimed to initiate discussions on both 'controversial' and 'non-controversial' issues that could lead to the introduction of new IRs/AMC/GM.
- Technical and Operational Requirements for Remote Tower Operations (RMT.0624): NPA 2017-21, which extends the non-binding regulatory material to multiple and more complex modes of operations, closed for comments on 3rd April 2018. The NPA introduces 'guidelines on remote aerodrome air traffic services' intended to support ATS providers and aerodrome operators implementing remote aerodrome ATS, as well as their competent authorities. The NPA also proposes a set of updated Acceptable Means of Compliance (AMC) and Guidance Material (GM) to Commission Regulation (EU) 2015/340. A consultation workshop was held on 19th March 2018 to inform stakeholders about the objectives of RMT.0624, present the regulatory proposal published, and provide clarification on the content of NPA 2017-21. EASA are in the final stages of evaluating and responding to comments. The publication of the ED Decision(s) and Comment-Response-Document (CRD) have both been delayed, due to the number and complexity of comments received, and are now expected in Q1/2019.
- 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 published Opinion 02/2018 in March 2018 proposing amendments to requirements for competent authorities and service providers (ATM/ANS.AR and ATM/ANS.OR). EASA Opinion 03/2018 was published on 22nd May 2018 and concerns amendments to the Common Requirements Regulation (EU) 2017/373 and Regulation (EU) 923/2012. Following discussions at EASA and the SSC, both Opinion 02/2018 and Opinion 03/2018 have been merged. The first technical discussion on the draft legal text took place at the EASA Committee meeting on 24th/25th October 2018. In parallel, EASA continues to elaborate the related AMC/GM accordingly, which is to be issued following the publication of the Regulation.

EASA is also preparing 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 expected amendments to Regulation (EU) No 677/2011(NF IR).

• Software assurance level (SWAL) requirements for safety assessment of changes to ATM/ANS functional systems (RMT.0469): The deadline for submission of comments on NPA 2017-10 closed on 30th November 2017. It proposes 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 held a focused thematic meeting with stakeholders on 16th October 2018, aiming to help finalise the ED Decision with the subject AMC/GM. This is anticipated to be issued in Q1/2019.

Part-MET - (RMT.0719): EASA held a MET expert group meeting on 5-6th September 2017 to consider amending Annex V (Part-MET) of Regulation (EU) No 2017/373 which was triggered by the latest ICAO Amendment 77-A. The expert group reviewed the provisions of Amendment 77-A and agreed on the changes to be made as well as corrections and consistency changes. The final outcome of rulemaking task RMT.0477, RMT.0445 and RMT.0719 have been outlined in Opinion 02/2018, detailing proposed amendments to Regulation (EU) 2017/373 and Regulation (EU) No 139/2014.

The amendments proposed in Opinion 02/2018 with respect to MET aim to improve the provision of hazardous metrological information, increase situational awareness and facilitate more efficient routings, harmonising Regulation (EU) 2017/373 with ICAO Annex 3 Amendment 77-A.

- Part-AlS/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 and details the outcome of rulemaking task RMT.0445. 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 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, will be processed following EASA standard procedure.

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. Given the publication of the rule, EASA is progressing with the completion of the AMC/GM. 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 has been 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.
- 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 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): EASA have been tasked with drafting an 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. The AMC/GM is expected to be
published in Q2 2019.

CONNECTING EUROPE FACILITY (CEF)

2018 CEF TRANSPORT CALL

The 2018 CEF Transport call for proposals opened on 17th May 2018. With an indicative budget of €450 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 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) 390/2013 (RP2)

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)

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

Airspace Harmonisation (EC) 730/2006, repealed by (EU) 2016/1185

Network Functions (EU) 677/2011, amended by (EU) 970/2014 and (EU) 2017/373

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

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 1033/2006

FMTP Regulation (EC) 633/2007, amended by (EU) 283/2011

DLS Implementing Rule (EC) 29/2009, amended by (EU) 2015/310

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

EASA ATM Rules

Common Requirements and Safety Oversight (EU) 2017/373, repealing (EC) No 482/2008, (EU) No 1034/2011, (EU) No 1035/2011, (EU) 2016/1377 and amending (EU) No 677/201

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.

SESAR

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

SESAR Deployment framework Regulation (EC) 409/2013

Pilot Common Project (EU) No 716/2014

Table 8: Existing Rules and Regulations

COMMUNITY SPECIFICATIONS

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

Table 9: Community Specifications



