ATM Information Digest

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

The authors welcome any comments or corrections on the content to improve its accuracy – please contact icbsupport@askhelios.com

NCP NSA Coordination Platform

ICB Industry Consultation Body

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

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*

- **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 Functions**: 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 ATM research, 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 the 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);
- **Human factors:** An overview of the status of work on human factors within SESAR.

4. *Safety*

- **Common requirements for service providers and their Oversight**: A summary of the subject regulation and EASA Rulemaking activity;
- **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;
- **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**: Provides an overview of the status of EASA Rulemaking Tasks related to Air Transport;
- **Connecting Europe Facility**: Provides an update on the status of SESAR funding through the Connecting Europe Facility (CEF), including details on open CEF Calls;
- **SES Legislation**: Provides a list of all existing legislation relating to SES.

1 EU Policy

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, including information on the 2017 CEF Transport SESAR Call for Proposals.

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.

Flight Path 2050 (Long Term Vision)

The European Commission published its long-term vision for Aviation in Europe, Flightpath 2050, in 2011. The report establishes how and where European research priorities should be set to maintain EU growth and worldwide competitiveness, while also meeting market needs and environmental challenges.

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.

The Aviation Strategy also underlines the importance of the implementation of the Performance Scheme, the evolution of the Network Manager towards an industrial partnership, the technological modernisation of the sector, and the promotion of cooperative arrangements with appropriate actors in key partnerships of the EU. It also makes clear the Commission's intention to promote the exchange of best practices among Member States concerning minimum service levels in airspace management.

Parliament Report on an Aviation Strategy for Europe

In response to the Commission's communication on an Aviation Strategy for Europe, the European Parliament 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 EU Upper Flight Information Region (EUIR), allowing continuity of air services in the event of unforeseen circumstances or disruptions of air traffic.

- 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, which draws on the conclusions of a study completed in February 2017 and on stakeholder consultation. The SWD assesses the operational and financial impact of ATM strikes on the EU network, and explains operational measures adopted by Member States to mitigate the impact of strikes, highlighting the benefits these measures bring to the Network.

The Communication:

- Encourages Member States and stakeholders, including social partners to: promote a sound and efficient social dialogue, provide early notification of strikes, encourage staff members to provide individual notification of participation in industrial action, and preserve overflights of Member States affected by strikes and protect air traffic peak periods;
- Encourages operational stakeholders and the Network Manager to reinforce their cooperation to address traffic disruptions in the event of strikes and further develop existing mitigation measures;
- Further explores the concept of a more integrated operating European Airspace with a view of ensuring continuity of service; and
- Urges the co-legislators to swiftly adopt SES 2+ proposals.

EU Aviation Agreements

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

1) In March 2016, the Council of the European Union authorised the EC to open negotiations with China and Japan in view of concluding Bilateral Air Safety Agreements (BASAs);
2) In June 2016, the EU member states granted the EC the exclusive mandate 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). The first round of negotiations has already taken place with the members of ASEAN and with Turkey;
3) A common aviation area (CAA) with EU's neighbours has been initiated. An aviation agreement with Ukraine has been negotiated and 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 European Commission has Air Transport agreements with, or is currently in negotiations with, is on the European Commission mobility and transport website.

EASA

Regulation (EC) No 216/2008 (EASA Basic Regulation), published on 19th March 2008 and amended by Regulation (EC) No 1108/2009 in November 2009, establishes the European Aviation Safety Agency (EASA) and dictates its remit, responsibilities, future implementing regulations, management and funding.

The EASA Basic Regulation is currently in the process of being updated – please refer to the Section Update to 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 Single European Sky on 30th November 2017. The audit confirms that the SES initiative to improve ATM across the EU addressed a clear need and has led to a greater culture of efficiency. However, European airspace management remains fragmented and the SES as a concept has not yet been realised. The ECA makes seven recommendations to the European Commission with a view to making the SES more effective:

- Revise SES High Level Goals (HLGs);
- Analyse other policy options targeting defragmentation;
- Ensure full independence and capacity of NSAs from ANSPs and cover the inspection gap at the level of the charging scheme;
- Streamline the Performance Scheme, and review certain key performance indicators;
- Review the EU's support structure to R&D with regard to its objectives;
- Reinforce the accountability of the SESAR JU; and
- 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.

SES 2+

The SES 2+ legislative proposal comprises a recast of the existing SES Regulations (SES Recast, 2013/0186 (COD)) and an amendment to the EASA Basic Regulation (2013/0187 (COD) (see also the EASA section, above). The two legislative proposals are currently undergoing ordinary legislative procedures in the European Parliament and the Council of the European Union. For the European Parliament, the TRAN Committee is responsible for both legislative processes.

Two 'committees for opinion' have been assigned to the SES recast fiche: the Industry Research and Energy (ITRE) Committee, and the Legal Affairs Committee. The ITRE Committee decided not to provide an opinion.

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

ATM Masterplan

The 2015 version of the European Air Traffic Management Master Plan (ATM Master Plan) was approved by the SESAR Joint Undertaking (SJU) Administrative Board on 15th December 2015. The plan forms the basis of the SJU's SESAR 2020 Research and Innovation Programme as well as identifying essential ATM functionalities. It was updated to refine the vision for future EU ATM systems, extend the performance ambition to 2035, and make explicit reference to cyber-security and RPAS.

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

The current version of the ATM Master Plan is planned to be supported by a recently developed drone addendum (awaiting publication), which aims to support safe and efficient integration of drones in all categories of airspace.

The campaign for the next edition of the European ATM Master Plan (2018) was launched in Tallinn on 8th November 2017. This edition will explore and address the challenges and opportunities presented in a new digital era of aviation, the role of SESAR in driving the digitalisation agenda forward, and the synergies between the European ATM Master Plan and the EU's Aviation strategy. In support of the move towards the 'Digital European Sky', European aviation stakeholders publicly committed to SESAR and the digital agenda by signing a joint industry declaration on 7th November 2017.

The first draft of the EU ATM Master Plan is expected in June 2018, which will be formally consulted with all ATM stakeholders from July to October 2018. Publication of the Master Plan is expected in December 2018.

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 on 16th February 2017 linked the question of air traffic service continuity to the European Upper Information Region (EUIR).

Subsequently, MEP (EPP, RO) Marian-Jean Marinescu requested the Commission to carry out a pilot project on European Airspace Architecture, earmarking €800 000 for the study. MEP Marinescu insisted on the need to go beyond the concept of FABs to imagine a future European Airspace where the current architecture would be redefined based on traffic flows. Following this request, the Commission is reflecting on the precise content of the study and who could deliver it: discussions are ongoing with both the SJU and the Network Manager.

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 U.S. and EU collaboration aims to harmonise and secure ATM modernisation efforts between these two projects.

The second edition of the NextGen – SESAR Joint State of Harmonisation was published in December 2016, providing a high-level summary of the current state of progress towards achieving harmonisation and global interoperability between NextGen and SESAR.

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 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 Memorandum of Cooperation (MOC) and the U.S-EU Aviation Safety Agreement that will expand areas for joint efforts on aviation safety and ATM harmonisation. The expanded agreement will now cover the full life cycle of Air Traffic Management modernisation activities from development to deployment.

Funding and Financing Modernisation in ATM

Implementation of the TEN-T

The implementation of the Trans-European Transport Network (TEN-T) is facilitated by Connecting Europe Facility (CEF) funds for the period 2014-2020 and was previously supported through TEN-T funds (2007-2013). SES and SESAR are recognised within the 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 SESAR JU). INEA also manages the remaining TEN-T projects.

Connecting Europe Facility (CEF)

The CEF is an integrated financial instrument for investing in EU infrastructure in relation to Trans-European Network projects covering transport, energy and telecommunications. The CEF 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.

The total budget of the CEF earmarked for transport related projects between 2014 and 2020 is over €24.05 bn, of which €11.3 bn will be transferred from the Cohesion Fund. Approximately €3 bn is allocated for SES-SESAR implementation up to 2020, which includes: €1.5 bn 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.

According to the ATM Master Plan, the target concept for SESAR deployment is expected to require an investment of between €18 bn and €26 bn by 2035. Further information can be found in the SESAR Deployment section.

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 and in the Connecting Europe Facility (CEF) section of the Annexes.

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% is allocated to 'Common Projects' and 20% to 'Other Projects'. An information day for the 2017 CEF Transport SESAR call was held on 19th of October 2017 providing an overview of the call, including background, content and timeline. The submission deadline for the call is 12th April 2018, with a decision on selected projects expected in July 2018.

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

Call	Indicative ATM Funding Value (pre-decision)	Funding received for PCP Projects	Funding received for non-PCP Projects	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	N/A

Table 1: Summary of the 2014, 2015 and 2016 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, with two cut off dates, the first of which was on 14th July and the second on 30th November 2017. €1 bn was made available for projects of common interest in the transport sector, reserving €40 million specifically for the Single European Sky through SESAR. Two proposals were submitted under the SESAR Priority for the first cut cut-off date.

Further information can be found in the in the Connecting Europe Facility (CEF) section of the Annexes.

European Fund for Strategic Investment

The EFSI Regulation was adopted in June 2015, establishing the European Fund for Strategic Investment (EFSI), and aiming to mobilise funding for projects of at least €315 bn 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 €315bn to at least €500bn, a result of the success of the EFSI proposal over the last three years.

EIB

The European Investment Bank (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 signed a Memorandum of Understanding 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.

2 Performance

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

- **Performance and Charging Schemes:** 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.

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 European Court of Auditors performed a performance audit of SES policy initiatives (covered under Air Traffic Management in the EU, within the EU Policy Section), which includes the Performance and Charging Schemes. The outcome was released on 1st December 2017 and will assist in the revision of the Performance and Charging Scheme Regulations for the next Reference Period.

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.

Final Decisions on the revision and consistency of performance targets were adopted for FABEC (2017/259 and 2017/553) and Switzerland (2017/258 and 2017/552) on 13th February and 22nd March 2017, respectively. FABEC and Switzerland's revised performance plans have since been accepted. Bilateral discussions with Members of BLUEMED regarding capacity targets are on-going.

Decisions on the revision ((EU) 2017/1985) and consistency ((EU)2017/2376) of cost-efficiency targets for Bulgaria, Malta and Poland were adopted on 31st October 2017 and 15th December 2017, respectively.

The revision of Romania's RP2 performance plan is being finalised. A meeting between the PRB and Romania to discuss this was held on 16th November 2017. At the National Supervisory Authorities Coordination Platform (NCP) Performance Working Group meeting in November 2017, the Commission noted that any Decision is likely to be adopted in 2018.

RP2 unit rates

The Commission and the PRU have analysed unit rates for 2018. There were issues with the 2018 unit rates of a few Member States, and bilateral discussions are in place to potentially revise them. Commission Implementing Decisions (EU) 2017/2378, on the compliance of unit rates for charging zones for 2017, and (EU) 2017/2390, on the compliance of the unit rate for the charging zone of Switzerland for 2017, were adopted on 15th December 2017.

Monitoring

The PRB annual RP2 monitoring report for 2016 was presented to the Single Sky Committee at SSC/66 in October 2017 (available on the membership portals). The report describes the performance achieved by FABs, EU Member States, Norway, Switzerland and the Network

Manager in the four Key Performance Areas (KPAs) of safety, environment, capacity and cost-efficiency. The report is based on monitoring reports submitted by the NSAs and the Network Manager, subject to the provisions of the Performance and Charging Regulations. It also presents the Union-wide view of performance achieved in 2016 compared to the relevant targets. This report is available in three volumes: European Overview, Local Overviews, and Safety Report.

For capacity, the Union-wide target for en-route ATFM delay (0.5 minutes per flight) was not met in 2015 or 2016. Average en-route ATFM delay in 2016 was 0.91 minutes per flight, an increase of almost 20% on 2015 results. Of particular note was that four FABs (UK-IR, SW, FABEC and Baltic FAB) missed their capacity targets in 2016.

The analysis of the Effectiveness of Safety Management (EoSM) Minimum Maturity Level Achieved by ANSPs showed that all ANSPs except one are already at Level C or above for Safety Culture, which is the 2019 target level. Although no safety targets were set for 2016, PANSA exhibited a low score and level for the EoSM indicator compared to the target level required in 2019, despite Polish CAA oversight.

Preparations for Reference Period 3 (2020-2024)

There have been notable developments over the past year with regards to the preparations for RP3 of the Performance and Charging Schemes. The main developments are as follows:

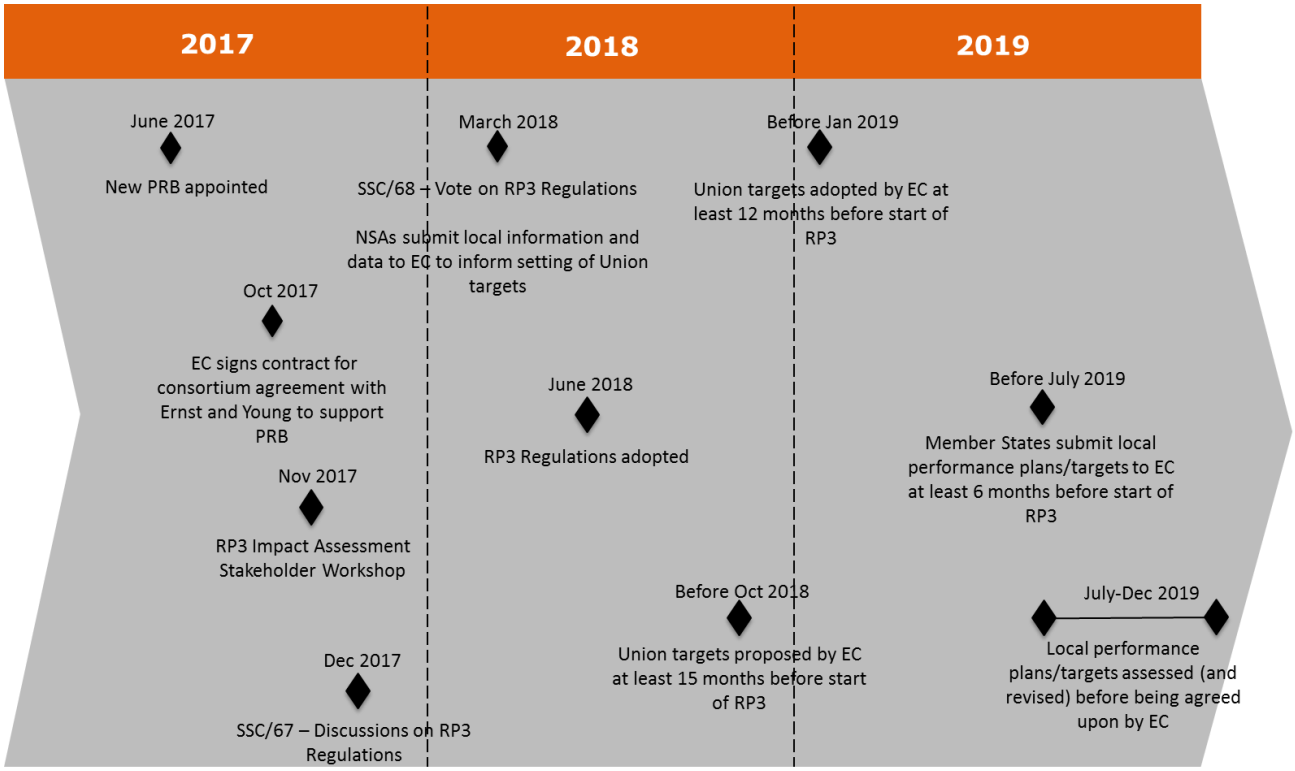
Date	Development
June 2016	The PRB produced a White Paper[1] introducing 16 performance objectives for RP3 related to existing network issues, which was followed by a summary of stakeholder comments on the Paper.
December 2016	Stakeholders were invited to present their positions on developments for RP3 at the Commission RP3 Hearing. The EASA safety working group also published a report setting out a proposal for safety KPIs to be included in RP3 of the Performance Scheme.
March 2017	The Commission presented option papers for the RP3 Performance and Charging Schemes at the Ad-hoc SSC meeting (available on the membership portals). States were asked to provide comments on these options by 21st April 2017. Following requests from States to ensure a bottom-up and early approach to target setting, the Commission explained that they would like to begin the target-setting process sooner than in previous RPs (by November 2017), and advised that States provide their initial cost and traffic forecasts by 31st January 2018 (now delayed to 31st March 2018).
September 2017	Steer Davies Gleave (SDG) published a report on the future of performance incentives. Suggested measures for RP3 include: A) targeted incentives led by NSAs for known operational problems of the State; B) a centrally administered delay penalty scheme; and C) a scheme that addresses an under-provision of capacity. Various permutations of these three measures were suggested for the RP3 impact assessment, which should conclude by Q1 2018.

[1] The PRB White Paper was presented to SSC/61, under item 2.4, and is available on the membership portals

Date	Development
November 2017 – January 2018	A RP3 Impact Assessment Stakeholder Workshop was held on 14th November 2017 to allow stakeholders to provide feedback on the various options for RP3 – outcomes of the Workshop were made available at SSC/67. At SSC/67, the Commission presented proposed changes to the Performance Scheme ((EU) No 390/2013) and Charging Scheme ((EU) No 391/2013) for RP3. Additionally, SDG has performed an impact assessment of the proposed changes to the Performance and Charging Regulations in RP3; the final report will be made available early in 2018. Both papers will inform the draft legal text for amending the Performance and Charging Regulations in preparation for SSC/68 in March.

Table 1: Recent developments in the preparations for RP3

The future timeline for the development of the RP3 Performance and Charging Scheme Regulations is indicated below:



New Performance Review Body (PRB)

Overview

Commission Implementing Decision (EU) 2016/2296 of 16th December 2016 set up the group of experts designated as the Performance Review Body (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 Ms Regula Dettling-Ott to assume the role of Chair. During the selection process, the Commission ensured that future PRB members had a balanced representation of competence and expertise, considering all KPAs. The new PRB started its activities in June 2017.

Technical support to the PRB

In October 2017, the Commission signed a contract for a consortium agreement with Ernst and Young to provide technical support to the PRB. This means that technical support to the PRB, or

the PRB Secretariat, will be organised so that the PRB is independent from all services and entities regulated under the Performance and Charging Schemes. EUROCONTROL will continue to provide performance data, which they also collect, validate and carry out quality assurance on, under a contract with the Commission.

Functional Airspace Blocks

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 study sought to identify best practices and to benchmark FABs against the applied criteria. A workshop based on the study's interim results took place on 29th November 2016. The full report was approved by the Commission on 22nd February 2017, and delivered to Member States on 27th April 2017.

Network Management

Regulatory context

The Network Functions Implementing Regulation (NF IR) (EU) No 677/2011, which was 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 for performing the network functions as defined in the NF IR.

The SSC provided a positive opinion on the NM budget for 2018 at SSC/66.

Cooperative Decision-Making Processes

The objective of Cooperative Decision-Making (CDM) processes is to establish efficient processes so that the Network Functions, defined in Implementing Regulation (NF IR) (EU) No 677/2011, are carried out in a fully transparent manner with all the required information from parties who will ultimately implement these decisions.

In April 2016, the NM published a paper on the Network CDM. The Network Functions cover various activities for which specific CDM processes have been developed. The key changes to these CDM processes included provisions for a third Country ANSP Arrangement, a simplification of the processes for European Route Network Design (ERND), and the development of a Crisis Management Process.

Summary of Network Performance

The Network Management Board (NMB) adopted the 2016 NM Annual Report in June 2017. This report provides an overview of the recent activities performed in the context of the Network Performance Plan (NPP). The NM's key achievements in 2016 were as follows:

- Network traffic increased by 2.8% and reached an all-time record of 10 190 903 flights, surpassing 2008 levels. ATFM delay was 0.86 min/flight, which was above the SES 0.5min/flight capacity target.
- There was significantly less delay in 2016 compared to 2008 (1.59 min/flt); the two years had similar traffic levels. Delays attributed to weather and industrial action accounted for 0.28 min/flight. The Nicosia, Athens and Macedonia ACCs all had good performance, with 70% fewer delays during the summer.
- The NPP set a target for the NM to reduce the total en-route ATFM delay by 10%. In 2016, delay savings exceeded 1 177 000 minutes from actions in the NM Operations Centre (NMOC) and through re-routing proposals (RRPs) by airlines. This resulted in 11.9% delay savings, thereby surpassing the 10% objective.

- The planned (KEP) and actual (KEA) horizontal flight-efficiency indicators were impacted by strikes and the Ukraine crisis (1.3 and 3 million nautical miles lost respectively). Combined with notably bad weather, these events contributed to the increase of the KEA, which was above the NPP target by 0.09 pp. Nevertheless, better routings proposed by the NM through re-route proposals led to savings of over 106 800 NM.

Update of Network Functions IR for RP3

In 2015, the Commission conducted an independent assessment of the effectiveness of the NM and the ways in which it has been established. An ex-post evaluation of the impact of the network functions, including an evaluation of NM effectiveness, is being performed by a consortium led by BIP. The review commenced in January 2017 and was due to conclude at the end of 2017.

In 2017 the Commission started work considering potential changes to the regulatory framework for the SES NM beyond RP2. At SSC/64, held on 21st February 2017, a number of Member States presented 'a States' view' on the future regulatory developments of NM arrangements, including the need for the NM to act with complete impartiality, to protect State interests, to manage sensitive data securely, and to ensure a pan-European approach to ATM.

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 to discuss key issues identified in the proposals. The conclusions of the ad-hoc SSC Working Group were presented to SSC/67 on 12th/13th December.

The Commission's intention is now to conclude the scope of revisions to the NF IR as soon as possible and to then proceed with a note on the implementing measures, following inter-service consultation. The aim is to present draft legal text at SSC/68.

Network Manager Nomination beyond RP2

In conjunction with the revision of the existing network functions regulatory framework, the nomination of the Network Manager starting from 2020 was identified as a topic for the SSC in 2017, in line with the Aviation Strategy the Commission published in 2015.

An input paper was put forward at SSC/66 on the state of play of the NM nomination, as a step towards the draft Commission Decision entrusting to Eurocontrol, or another impartial and competent body, the tasks necessary for the execution of network functions. The paper also summarised the views recently expressed by the Member States and the ICB, and focused on the process for the nomination of the NM, including the Commission's suggestion for a service level agreement between the designated body and the Commission.

The SSC is expected to provide an opinion on the Commission Implementing Decision on the Future Designation of the EU ATM Network Manager at SSC/70 in November 2018.

3 Technology

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

- **SESAR Development:** An overview of ATM research, 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);
- **Human factors:** An overview of the status of work on human factors within SESAR.

SESAR Development

ACARE

In response to the Flightpath 2050 vision, the ACARE (Advisory Council for Aviation Research and innovation in Europe) produced a Strategic Research and Innovation Agenda (SRIA) in 2012, alongside the establishment of new research programmes including Horizon 2020 (see below). 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 bn 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 2016–2017 was published on 25th July 2016.

SES ATM Research

The current version of the ATM Master Plan is covered in detail under Air Traffic Management in the EU, within the EU Policy Section. The 2018 Master Plan Update Campaign was launched in November 2017 – priorities for the 2018 update include defining a clear vision for drones and for CNS. An addendum for drones, produced by the SJU, is planned to be added to the current version of the Master Plan.

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 3 (2013), Release 4 (2014) and Release 5 (2015). The SESAR Solutions Catalogue, initially released by the SJU on 14th June 2016 and

updated in June 2017, draws together 63 SESAR Solutions delivered by SJU members and partners to modernise Europe's ATM system.

Final evaluation of the SESAR JU operating under SESAR 1

As required by Article 7 of the Council Regulation (EC) No 219/2007, amended by Regulation (EU) No 721/2014, a final evaluation of the SESAR Joint Undertaking (SJU) in executing the SESAR 1 programme from 2007 to 2016 was published in October 2017. The evaluation was conducted between January 2017 and June 2017 by a team of independent experts, and considered the five key criteria of relevance, efficiency, effectiveness, coherence and EU added value, while also considering openness, transparency and research quality.

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.

The SESAR 2020 Programme is based on the ATM Master Plan and is split into three main research phases:

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

The total funding of €1.5bn 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

The SESAR JU will launch Calls for Proposals (CfPs) for SESAR 2020 Projects in two waves:

1) Wave 1 (2016–2019), and
2) Wave 2 (2019–2021).

The Wave 1 CfP for SESAR JU members was published by the SJU in October 2015, covering industrial research, and validation and preparation for VLD activities for the period 2016-2019, 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. The Call covered three Work Areas broken down into 28 topics, with a total budget of €260.1 million; the indicative budgets for each topic can be found in the Amended Annual Work Programme 2015. Contracts were signed for 20 projects in Q4 2016, totalling €246.5 million of EU funding.

The second Call for Proposals for SESAR JU members – Wave 2 – is expected to be released in 2018, and will cover the period 2019-2021. The overall estimated budget for the IR and VLD activities of SESAR 2020 (Wave 1 and Wave 2) is €398 million.

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. The evaluation was conducted between January and June 2017 on a similar basis to the final evaluation of SESAR 1, as described above. Results will be used to improve the performance of the SESAR JU and communicated to the European Parliament and Council and the wider aviation community.

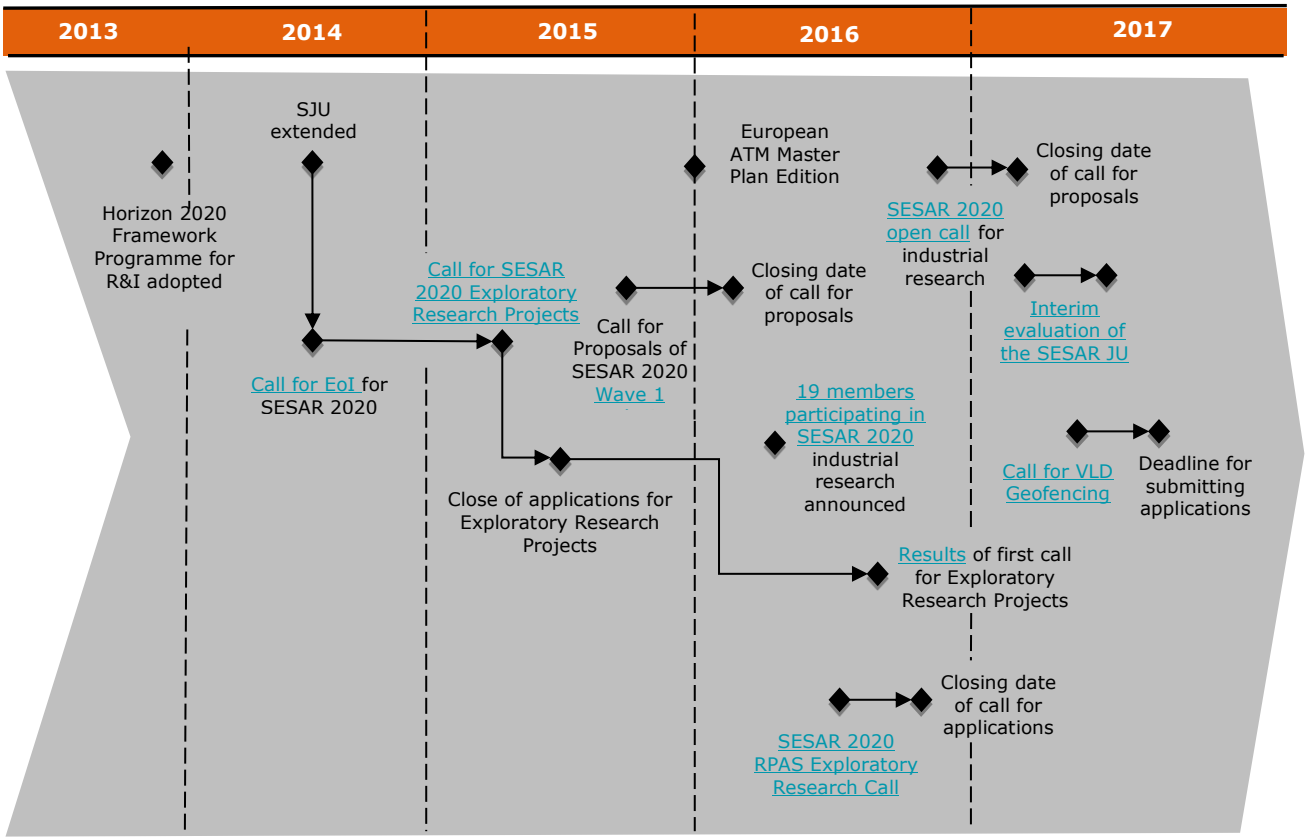
SESAR 2020 Exploratory Research

The objective of the SESAR 2020 Exploratory Research (ER) Programme is to address the known, yet unsolved, problems across the ATM Research domain. It has an overall budget of €85 million.

In March 2015, the SJU published the first Call for proposals for SESAR 2020 ER projects under the umbrella of the Horizon 2020 Research Framework Programme. 28 projects were selected for €20.4 million of funding, which will run until 2018.

On 28th June 2016 the SJU published the RPAS (Remotely Piloted Aircraft Systems) Exploratory Research Call, with an overall budget of €9 million available for seven research topics. The Call closed in November 2016, with a total of 59 proposals submitted. Nine projects were selected for funding.

In December 2016, the SJU published the most recent Call for proposals for SESAR 2020 ER projects and VLD activities, with a budget of €28 million. The Call closed in May 2017, with 35 of the 63 projects submitted evaluated to be 'above threshold'. The first grant agreements were expected to be signed by December 2017.



SESAR Deployment

SESAR Deployment

The Commission adopted, with the favourable opinion of the SSC, the Implementing Regulation (CIR) (EU) No 409/2013 on the governance of SESAR Deployment in May 2013. The CIR defines four key instruments needed for SESAR deployment within the SES framework: common projects, the deployment programme, a governance mechanism, and targeted incentives.

Responsibility for the management level of the deployment governance is held by the Deployment Manager. The SESAR Deployment Alliance 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 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**: Led by the Deployment Manager, the Management level develops, maintains and implements the Deployment Programme, and manages the implementation level;

3) **Implementation level**: Consists of individual implementation projects to execute the Deployment Programme.

Policy level

The Commission has established the policy level of the deployment governance, for which it is directly responsible.

Pilot Common Project

The PCP CIR (EU No 716/2014) was published in May 2014. The PCP mandates the implementation of six ATM Functionalities (AFs) across specified stakeholders. A review of the PCP was carried out in late 2017 (see below).

A 2016 status report on the progress of SESAR deployment was completed upon request from the European Parliament's TRAN Committee. It said that PCP implementation is currently on track; however, there are delays anticipated for the PCP pre-requisites.

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 CIR 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 by the SJU, originally scheduled for delivery on 30th November 2017 in line with the PCP review, was due to be submitted to the Commission before the end of January 2018.

Following the receipt of the PCP and CP2 proposals, the Commission will review them in coordination with the SJU and SDM to assess their compliance with the mandates and understand the rationale behind them. 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 public consultation is scheduled to be launched between February and May 2018 and will include a workshop to collect the views of the broader stakeholder community (including the ICB). The consultation will be used to refine the proposals and prepare the draft legal texts.

A vote on the draft legal texts is provisionally scheduled to take place at SSC/69 in November 2018.

Management level

Deployment Manager

In accordance with CIR (EU) No 409/2013, responsibility for the management level of the deployment governance is held by the SESAR Deployment Manager (see the start of this section). The SDM's coordination tasks are funded through a levy on CEF grants, which are managed by INEA.

Recent Memorandums of Understanding (MoUs) and Memorandums of Cooperation (MoCs) signed by the SDM are summarised in Table 2. These Cooperative Arrangements, among others, were formally approved by the Commission through Decision C(2016) 6332 final.

Partner	Date signed	Link	Purpose
EIB	01/06/2016	Memorandum of Understanding EIB	Ensure a range of financial instruments and mechanisms are available to industry stakeholders to support the implementation and sustainable financing of the SESAR Deployment Programme (see also the Funding and Financing Modernisation in ATM section).
NM	08/06/2016	Cooperative Arrangement NM	Cooperate on the development, maintenance and execution of the SESAR Deployment Programme, ensuring coherence with the Network Strategy Plan, the Network Operations Plan, the European Route Network Improvement Plan, and the central Air Traffic Flow Management function.

Table 2: Recent Memorandums of Understanding (MoUs) and of Cooperation (MoCs) signed by the SDM

In addition, to facilitate the industrialisation processes for PCP SESAR solutions and to ensure the timely availability of standards and products according to the Deployment Programme, in March 2017 the SDM signed a series of MoUs with the manufacturing industry, which covered 20 ATM-related manufacturers who had expressed their willingness to co-operate with the SDM.

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

Deployment Programme (DP)

The Deployment Programme 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 Deployment Manager released the 2017 proposal for update of the Deployment Programme on 31st May 2017; however, the 2015 version of the Deployment Programme remains the official reference document until the 2017 version is approved by the Commission.

The 2017 Deployment Programme is complemented by Guidance Material for SESAR Deployment Programme Implementation. This guidance is comprised of two documents. The 2017 Monitoring View, released on 10th October 2017, provides an overview of the current implementation status of the PCP within Europe. The 2017 Planning View, released on 28th July 2017, provides a more detailed planning tool for Operational Stakeholders involved in the deployment of PCP Regulation, clearly defining the scope of the implementation activities as well as the suggested approach to deployment.

All documentation, including Annexes, can be found within the publications section on the SDM website.

Data Link Services (DLS)

On 19th October 2016, the Deployment Manager was appointed by the Commission as the Data Link Services (DLS) Implementation Project Manager, thus acting as an architect for DLS implementation in Europe.

A DLS Recovery Plan, based on the SDM's "DLS Implementation Strategy towards Initial Trajectory Information Sharing" and the ELSA Consortium's "VDL Mode 2 Measurement, Analysis and Simulation Campaign", was published by the SDM on 17th October 2016. It identifies the actors, milestones and activities required to achieve full DLS implementation in Europe, avoiding inappropriate investments.

The DLS Recovery Plan is organised into two 'Paths':

- Path I, which covers the Implementation of the DLS transitional solution, aiming to meet the requirements of IR (EU) 2015/310 and ELSA's recommendations; and
- Path II, which covers the preparatory activities and necessary steps for the implementation of the envisaged target solution (Model D).

Path II activities commenced in March 2017, and the definition of Service Areas and technical architecture has already been completed. The development of an accompanying Business Case, and the definition of transitional activities and DLS governance are in progress.

On 29th September 2017, the SDM published a Report on Service Areas and DLS overall Architecture. The Report has two independent sections:

- A *Service Areas proposal* for the definition of Service Areas, as an initial step towards the implementation of the DLS target solution in Europe; and
- A *Report on DLS overall architecture* defining the main steps towards the implementation of the DLS target solution.

Datalink has been included in the priority families for the 2017 CEF Transport SESAR Call for funding, and the SDM has encouraged the submission of projects contributing to the implementation of the DLS Recovery Plan.

A dedicated website has been created as a unique 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 DLS workshop was held on 17th November 2017, in Brussels, to provide a technical and regulatory update on the implementation of DLS.

Implementation level

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 finished the comments review on 30th June 2017, and the draft revised rule text is now in the final phase to be included in the Opinion. This should ultimately result in the incorporation of AIS/AIM requirements (including those from the ADQ IR) into the Common Requirements, and

the repeal of the ADQ IR, which was last amended in September 2014 by Regulation (EU) No 1029/2014.

Surveillance Performance and Interoperability IR

Step one of the Commission's two-step approach for revision of the SPI IR was completed in September 2014 with the publication of Regulation (EU) No 1028/2014. This was subsequently updated with the publication of Regulation (EU) 386/2017. The deadline for equipping aircraft was delayed to 7th June 2020. A consolidated version of the SPI IR is also available.

Step two comprises more significant changes, following a detailed review for the scope and impact. EASA Rule Making Task (RMT).0679 was launched in 2015 to revise the Implementing Regulation.

The Commission, on the basis of EASA recommendations, presented a proposed amendment to Regulation (EU) No 1207/2011 at the Ad-Hoc SSC on 2nd June 2016. The Commission also hosted a workshop on 14th July 2016 on compliance issues with the Regulation. At the SSC/66 on 25th October 2017, it was confirmed that EASA is preparing a proposal in the form of a report to the Commission on ensuring a balanced application of current surveillance technologies, due before the end of 2017.

Voice Channel Spacing (VCS) 2 IR

The Commission held a workshop on the Voice Channel Spacing (VCS) 2 IR in January 2015 to assess the implementation of the Regulation, resulting in the NM taking on a central role in VCS implementation and reporting to the SSC.

Implementing Regulation EU) No 2016/2345 was published on 14th December 2016. A consolidated version of Regulation 1079/2012 and its amendments is also available.

A workshop on 8.33 kHz VCS implementation was help on 27th October 2017, with the Commission, the NM and EASA as keynote speakers. The workshop proposed that the NM will run a network impact simulation in Q1 2018, and that common themes from the keynote speeches will be reviewed by the Commission before being sent to the SSC for endorsement. A similar workshop in 2018 was suggested to discuss progress in the first half of the year.

Data Link Services IR

Regulation (EU) 2015/310, amending (EC) 29/2009, was published on 26th February 2015. The ground implementation deadline is now 5th February 2018, and the airborne implementation deadline is 5th February 2020.

A mandate by the Commission published on 12th January 2017 requires EASA to clarify exemptions applicable to aircraft and to propose amendments to the DLS IR. The ToRs for RMT.0524 (the action to review the DLS IR) are expected to be released imminently, and the first meeting of the Rule Making Group is to be held in January 2018. The adoption of a minor DLS IR amendment is currently scheduled for Q2 2018, and a more substantial amendment resulting from the work of RMT.0524 is provisionally planned for Q4 2019. Additionally, the SSC is scheduled to vote on a Decision updating the exemptions to the DLS IR in March 2018.

Further information on the implementation of DLS within Europe can be found under SESAR Deployment.

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 Annexes. EASA is assisting the Commission in developing the final text for the IR.

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, and repealing Commission Regulation (EU) No 1332/2011. Subpart PBN of the Annex to this draft Regulation establishes the specific requirements for the introduction of PBN, which shall apply from 6th December 2018 and which ANSPs, aerodrome operators, the Network Manager and EASA must comply with.

The SES Navigation Strategy and PBN Workshop was held on 20th March 2017. The Commission outlined their Navigation Strategy and what the PBN environment would look like, stemming from both PCP and PBN IRs. The Navigation Strategy will be put forward in support, with contribution from EASA. Workshop material and summary report from the Navigation Strategy and PBN Implementing Regulation workshop are available on the membership portals. EASA is currently assisting the Commission in the adoption process of the draft PBN IR, which was made with consideration of the workshop outcomes.

Pending the adoption and publication of the final PBN rule, EASA is progressing with the completion of the AMC/GM. An NPA is also being prepared by EASA for updating the Certification Specifications for Airborne Communication Navigation and Surveillance (CS-ANS) 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

Under SES 2+, the process of demonstrating compliance with the Essential Requirements of the interoperability Regulation is to be moved from the SES legislation to the EASA Basic Regulation. Whereas this process (Conformity Assessment) has been supported by EUROCONTROL to date, EASA will take the lead in the future.

An RMT on the future of Conformity Assessment was scheduled to start in 2016; however, it is now suspended due to the delay in implementing SES 2+.

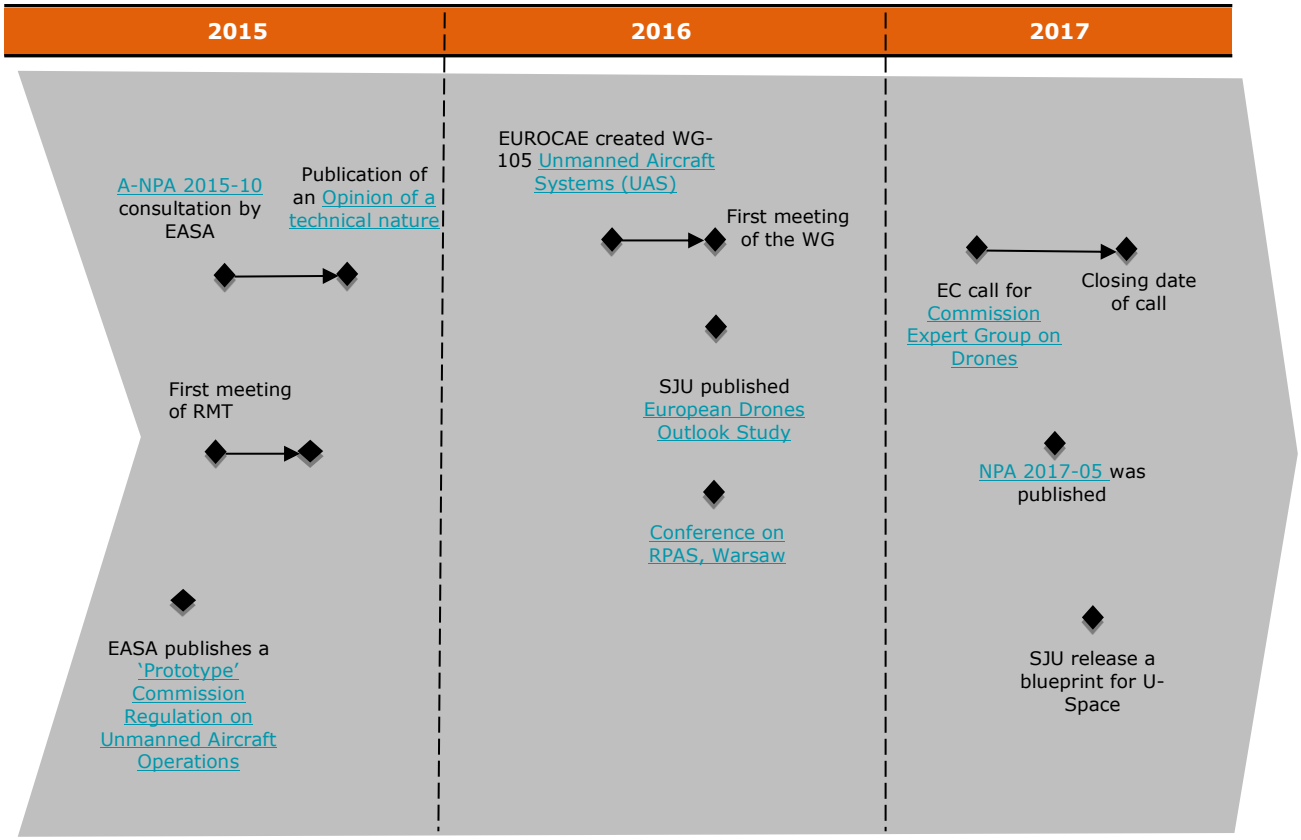
ATM Standardisation - EASCG

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 Single European Sky 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 was published in September 2017.

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.



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 30th September 2016, EUROCAE announced the creation of EUROCAE WG-105 Unmanned Aircraft Systems (UAS), which is 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.

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.

A High-Level Conference on RPAS was held by the Commission on 23rd – 24th 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, with an estimated maximum co-financing budget of €5 million.

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 30th November 2017, European Parliament representatives and EC negotiators informally agreed on new regulation for the civil use of UAVs across the EU, which must now be approved by the Council of Ministers.

With the intention to coordinate actions and develop a roadmap required for the safe integration of all drones, the SJU has produced a drone update to the ATM Master Plan, which is awaiting publication. The work for the 2017 drone update was organised in three separate Working

Groups focusing mainly on controlled airspace (IFR flights/certified category), U-Space (very Low level flights) and Standardisation and Regulations.

A draft blueprint for the development and rollout of U-space was released by the SJU on 20th April 2017; it seeks to refine the concept of U-Space and establish a timeline for the introduction of safe, widespread drone operations throughout Europe by 2019.

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.

The EU has committed €44 million under Horizon 2020/SESAR to the integration of drones.

UAS Standardisation – EUSCG

The European UAS Standards Cooperation Group (EUSCG) had its kick-off meeting in June 2017, with a preliminary version of the European UAS Standardisation Rolling Development Plan (RDP) published in November 2017. The group's focus extends beyond ATM, and includes licensing and certification.

Human Factors

Human Performance in SESAR

SESAR 1 Achievements

SESAR 1 included Human Performance as a transversal solution in a dedicated Work Package (WP 16). Projects related to Human Performance (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 – an essential step to overcome previously segregated analyses at an individual stakeholder level. This methodology helps to link airborne and ground partners, and establishes 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 is to advise 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.

4 Safety

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

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

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 2016 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 (EU) No 2017/373 was published on 1st March 2017, repealing Regulation (EC) No 482/2008, and Implementing Regulations (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. EASA released Easy Access Rules for Regulation (EU) No 2017/373 on 22nd November 2017.

Update to 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 is currently undergoing ordinary legislative procedure. A report on the Proposal by the European Parliament's TRAN Committee was published in May 2016 and voted on 10th November 2016. TRAN Committee members were generally supportive of the Commission proposal, but called for the aviation authorities to be given the necessary human and financial resources to deal with their tasks adequately, and added requirements relating to minimum service levels and to unmanned aircraft.

The Transport, Telecommunications and Energy Council agreed on a general approach to updated aviation safety rules to start the negotiations with the Parliament on 1 December 2016. Notably, Member States did not support changes to the financing of the Agency, nor the creation of a new oversight mechanism.

Three trilogue meetings were held between March and June 2017, and on 1st June 2017 the European Parliament sent counter-proposals to the Presidency covering the whole regulation and

its annexes. However, the third trilogue meeting, held on 6th June, demonstrated that the positions of the Parliament and the Council differed on several issues, including changes to the financing of the Agency and the creation of a new oversight mechanism.

Interinstitutional 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. Before publication, the agreed text must be formally approved first by the Parliament and then by the Council, which is expected to be completed in Spring 2018.

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 also covers new rules with regards to oversight activities, enabling NSAs to delegate some of their oversight tasks to EASA (or other organisations). EU-wide rules on drones will be introduced through the text, with an additional provision for EASA to develop more detailed rules through a Commission implementing act.

A mechanism for pooling and sharing of aviation inspectors and other experts is also introduced, along with a dedicated support mechanism to assist Member States in cooperative oversight. In addition, the text provides new rules for the safe provision of ground-handling services and closes several other safety gaps.

European Plan for Aviation Safety (EPAS) 2018-2022, including the EASA Rulemaking and Safety Promotion Programme

The Draft EASA Management Board Decision (Decision 08-2017) adopts the European Plan for Aviation Safety (EPAS) 2018-2022, including the Rulemaking and Safety Promotion Programme (RMP). For this edition, the EPAS and RMP have been combined into one 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 European Plan for Aviation Safety (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 2017

The EASA Annual Safety Review 2017 was published on 14th June 2017 and is intended to provide an overview of aviation safety in Europe across all aviation domains. The analysis presented in the review and the domain-specific safety risk portfolios supported the development of the European Plan for Aviation Safety (EPAS) 2018-2022. This edition of the Annual Safety Review extends the analysed safety risk portfolios to aerodromes/ground handling and ATM/ANS portfolios, bringing the total number of domains to 13. In addition to providing a statistical summary of aviation safety in EASA Member States, the review identifies the most important safety challenges faced in European aviation today from the European Safety Risk Management (SRM) process, using input from the Network of Analysts (NoA) and Collaborative Analysis Groups (CAGs).

5 Annexes

Useful Resources

Strategy Documents	Date of Publication
European ATM Master Plan Level 3, 2017 Implementation Plan	September 2017[2]
European ATM Master Plan Level 3, 2016 Implementation Report	September 2017
European Network Operations Plan	June 2017
Aviation Strategy for Europe	February 2017
European ATM Master Plan Level 3, 2016 Implementation Plan	December 2016
Network Strategy Plan 2015 to 2019	March 2015
Network Operational Concept 2019	March 2015
Pilot Common Project Implementing Regulation (PCP IR) No 716/2014	June 2014
ATM Performance and Benchmarking	
Network Operations Report – September 2017	October 2017
Monthly CODA Reports	Latest: September 2017
Annual Network Operations Report 2016	May 2017
CODA 2016 Annual Digest	April 2017
CANSO Global ANS Performance Report 2016	December 2016
PRB Publications	
PRB Performance Dashboard	Monthly Updates
PRB Annual Monitoring Report 2015	December 2016
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 White Paper – RP3 Performance objectives[3]	June 2016
PRB RP2 Union-wide Targets Final Report	September 2013
Safety	
ICAO Safety Report 2017	July 2017
EASA Annual Safety Review 2017	June 2017
SRC Annual Safety Report 2016	January 2017
Global Aviation Safety Plan (ICAO) 2017-2019	December 2016
EASA Practices for risk-based oversight (RBO)	November 2016
European Aviation Safety Plan (EASA) 2014-2017	May 2014
Traffic Forecasts	
STATFOR Industry Monitor	Latest: October 2017
STATFOR Seven-Year Forecast 2017 to 2023	September 2017
STATFOR Immediate Two-Year Forecast 2017-2018	May 2017
STATFOR 20-year Forecast 2012 to 2035	June 2013
STATFOR Very Long-Term Forecast 2013 to 2050	June 2013

[2] Endorsed by the Provisional Council of EUROCONTROL in September 2017 – review and approval by the SJU Administrative Board was expected for Autumn 2017

[3] The PRB White Paper was presented to SSC/61, under item 2.4, and is available on the membership portals

SES Compliance	Date of Publication
EPRS Briefing on Public-Private Partnerships in Research	May 2017
LSSIP State Reports	2016
ESSIP Plan 2015 Edition	January 2016
ESSIP Report 2014	June 2015
EPRS Briefing on Single European Sky status	April 2015
SESAR JU and SESAR Deployment	
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 Annual Activity Report 2016	June 2017
European Drones Outlook Study	November 2016
SESAR 2015 Annual Work Programme	October 2016
NextGen-SESAR: State of Harmonisation	2016
SESAR Release 5	2015
SESAR 2020 Multi-Annual Work Programme	July 2015
Other documents	
NextGen Update: 2017	April 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
Challenges of Growth 2013	July 2013

Table 3: 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 these 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

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.

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 June 2017) closed and/or had their results published.

1. European Commission	
Interim Evaluation of Horizon 2020	Consultation period: 20/10/2017 – 15/01/2017 (Results)
EU Air Safety ('Black List of Airlines') Regulation	Consultation period: 11/08/2017 – 07/11/2017
Evaluation of Regulation 996/2010 on Investigating Aviation Accidents in the EU	Consultation period: 05/07/2017 – 04/10/2017
2. Performance Review Body	
No open consultations	
3. European Aviation Safety Agency (ATM relevance only)	
Notices of Proposed Amendments	
Technical and operational requirements for remote tower operations (NPA 2017-21)	Consultation period: 20/12/2017 – 03/04/2018 (Decision expected Q2 2018)
Introduction of a regulatory framework for the operation of Drones (NPA 2017-05 (A), NPA 2017-05 (B))	Consultation period: 12/05/2017 – 12/08/2017 (Decision expected Q2 2018)
Software assurance level (SWAL) requirements for safety assessment of changes to ATM/ANS functional systems (NPA 2017-10)	Consultation period: 28/06/2016 – 30/11/2017 (Decision expected Q2 2018)
In-flight recording for light aircraft (NPA 2017-03)	Consultation period: 03/04//2017 – 03/07/2017 (Opinion expected Q1 2018, Decision expected Q4 2018)
4. EUROCAE	
Minimum Operational Performance Specification for Global Navigation Satellite Ground Based Augmentation System Ground Equipment to Support Category I Operations	Consultation period: 05/07/2017 – 09/08/2017
Guidance to achieve ATM Validation Platforms Interoperability	Consultation period: 25/09/2017 – 30/10/2017

Table 4: Public Consultations

On-going Legislation

Single Sky Committee

1. Recently approved Commission Implementing Regulations and Decisions	
Compliance of unit rates	
Commission Implementing Regulation (EU) 2017/2378	Adopted on 15th December 2017
Commission Implementing Regulation (EU) 2017/2390	
Consistency of performance targets	
Commission Implementing Decision (EU)2017/2376	Adopted on 15th December 2017
Commission Implementing Decision (EU) 2017/553	Adopted on 22nd March 2017
Commission Implementing Decision (EU) 2017/552	Adopted on 22nd March 2017
References to ICAO provisions	
Commission Implementing Regulation (EU) 2017/2159 (amending Regulation (EU) No 255/2010)	Adopted on 20th November 2017
Commission Implementing Regulation (EU) 2017/2160 (amending Regulation (EU) No 1079/2012)	
Revised performance targets	
Commission Implementing Decision (EU) 2017/1985	Adopted on 31st October 2017
Commission Implementing Decision (EU) 2017/259	Adopted on 13th February 2017
Commission Implementing Decision (EU) 2017/258	Adopted on 13th February 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.
2. Proposals awaiting decision	
PBN IR (Amending Implementing Regulation (EU) No 1332/2011)	Vote suspended until SSC/68
ICAO IFPL (Amending Regulation (EU) No 1033/2006)	To be adopted by the SSC through written procedure
3. Expected Proposals (further information can be found in the Status of EASA Rulemaking Activities)	
DLS exemptions	SSC vote on proposed exemptions is expected in March 2018
Performance and Charging Schemes	SSC Opinion on legislative changes for RP3 expected in March 2018
Surveillance Performance and Interoperability	EASA is working on a proposal to amend Regulation (EU) No 1207/2011 in the form of a report to the Commission
Network Functions IR	SSC Opinion expected March 2018
Part-AIS/AIM **Part-ASD** **Part-MET**	EASA Opinion due
Part-ATS	Opinion and draft ED Decision expected in Q1/2018

Table 5: On-going Legislation

European Parliament Procedures

Proposals awaiting first reading by EP		
None		
Proposals adopted by EP in first reading and awaiting Council position		
Implementation of Single European Sky (Recast)	COM(2013)0410 2013/0186(COD)	Debate in Council on 03/12/2014
Aerodromes, air traffic management and air navigation services: simplifying and clarifying the legal framework	COM(2013)0409 2013/0187(COD)	Text adopted by Parliament on 12/03/2014
Common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency	COM(2015)0613 2015/0277(COD)	Debate in Council on 08/06/2017
Recently adopted acts		
None		
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 6: 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" (IR/AMC/GM), for which ToRs were published on 10th August 2017. EASA is currently analysing possible amendments, ready for regulatory activities to be initiated in Q1/2018.
- **Technical and Operational Requirements for Remote Tower Operations (RMT.0624):** NPA 2017-21 was published for consultation on 20th December 2017. The NPA introduces 'guidelines on remote aerodrome air traffic services' intended to support ATS providers and aerodrome operators implementing remote aerodromes 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. The deadline for submission of comments is 3rd April 2018.

- **Common requirements for service providers and the oversight in ATM/ANS and other ATM network functions (RMT.0719)**: Following the publications of 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. 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 18 August 2017. The first amendment under RMT.0719 will consider both the impact of ICAO Annex 3 amendment 77 regarding MET services and EASA work on cyber security.

- **Software assurance level (SWAL) requirements for safety assessment of changes to ATM/ANS functional systems (RMT.0469)**: NPA 2017-10 was issued for consultation on 28th June 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. The deadline for submission of comments was 30th November 2017, and EASA are now preparing to issue the ED Decision on additional AMC/GM addressing SWAL, well in advance of 2nd January 2020 applicability date of Regulation (EU) No 2017/373. The outcome of the consultation will be reported at SSC/68.

- **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 due to 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 amendment to Part-MET will be proposed in an Opinion, which was planned for publication by the end of Q4/2017 but is not yet available.

- **Part-AIS/AIM - Technical requirements and operational procedures for Aeronautical Information Services (AIS) and Aeronautical Information Management (AIM) (RMT.0477, RMT.0478):** The review of comments on NPA 2016-02 concluded on 30th June 2017. The draft revised rule text, associated AMC/GM and CRD are in the final phase to be included in an Opinion. 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):** The public consultation of NPA 2016-09 was closed on 28th February 2017. EASA received 1763 comments and planned to hold a series of thematic review meetings to focus on specific subjects. The first of these meetings was held in June 2017 and focussed on AFIS requirements. An Opinion and draft ED Decision, which were initially expected in Q4/2017, have been delayed until Q1/2018, to account for the complexity of the review process. The new AMC and GM to Part-ATS (Annex IV to ED Decision 2017/001/R) was published on 8th March 2017

- **Technical requirements and operation procedures for airspace design (ASD), including procedures design (RMT.0445).** The consultation period for NPA 2016-13 expired on 31st March 2017. In preparation for publication of an Opinion, EASA conducted focused consultation and held a thematic meeting on 5-6th September 2017. The Opinion, which was expected to be published by the end of 2017, will amend Article 3 to address

Member States' responsibilities regrading airspace design. This is because it is a sovereign function and therefore should not be part of the certification scheme for ATM/ANS service providers. Annex XI will lay down the specific requirements for organisations performing flight procedure design, which would be part of the certification scheme.

- **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 has initiated RMT.0476 "Regular Update of SERA rule" for which ToRs were published on 18th August 2017. The first amendment under RMT.0476, which has been triggered by recent ICAO developments, alignment with Part-ATS and stakeholder feedback, was due to be proposed in an Opinion in Q4/2017 but is not yet available. EASA has also launched RMT.0230 to address UAS airspace integration, which is addressed below.

SES technical (interoperability) rules

- **PBN IR (RMT.0639):** EASA is assisting the Commission in the adoption process of the draft PBN IR based on Opinion 10/2016 and is progressing with the completion of the AMC/GM pending publication of the final rule. 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 has revised its plan to publish an NPA on Regulation EU No 1207/2011 by the end of 2017 and is now working on a proposal to amend the SPI Regulation in the form of a report to the Commission.

- **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 are expected to be published imminently. An NPA is planned to be published in Q4 2018, followed by an Opinion in Q2 2019; an amendment to the DLS IR is expected to be adopted in Q4 2019, although this is a provisional timeline.

  As part of EASA's task to review the exemptions criteria for DLS, a report containing EASA's proposal for DLS exemptions has been provided to the Commission, based on stakeholders' feedback from the consultation in May 2017. An SSC vote on the proposed exemptions is expected in Q2 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. NPAs were due to be published for consultation with Member States in Q4/2017 (EBT only, not yet available) and Q1/2019, with decisions expected in Q4/2018 (EBT only) and Q4/2020, respectively.

- **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 and 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, details 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 proposes to create a new regulation to mitigate the risk of operations for open and specific categories of UAS. EASA organised a workshop on the 5th July 2017 to facilitate comments and stakeholder feedback on the NPA. Consultation on the NPA concluded on 15th September 2017.

Connecting Europe Facility (CEF)

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 makes €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 is not split between a Cohesion and General Call.

The submission deadline for the Call is 12th April 2018, with a Decision on selected projects expected for July 2018.

The SESAR Deployment Manager is coordinating the submission of projects submitted under the 'Common Project' category, for which 80% of the available funding is expected to be made available. The deadline for the provision of the final IP Descriptions to the SDM was 19th January 2018.

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 30th November 2017. Evaluations of proposals submitted before the first cut-off was in July – November 2017, with the signing of grant agreements expected in January 2018. Evaluations and signing of grant agreements for the second cut-off will be during December 2017 to March 2018 and May 2018, respectively.

Applicants were invited to submit proposals for either cut-off date. However, the available funds may be fully allocated to proposals submitted under the first cut-off. In this instance, there will be no funding available for proposals submitted in the second cut-off.

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 (2.21 times the indicative overall budget of €1 billion).

Results of the 2016 CEF Call

On 25 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) 552/2004, amended by (EC) 1070/2009
COTR Regulation (EC) 1032/2006, amended by (EC) 30/2009
IFPL Regulation (EC) 1033/2006, amended by (EU) No 428/2013 and (EU) 2016/2120
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 677/2011
EASA Basic Regulation (EC) No 216/2008 repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/E
ATCO Licence (EU) 2015/340, repealing (EU) 805/2011 and Directive 2006/23/EC
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 7: Existing Rules and Regulations

Community Specifications

Developed by ESOs	
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 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
Initial Flight Plan System (IFPL)	Spec-0101 Ed. 1.2
ATS Data Exchange Presentation (ADEXP)	Spec-0107 Ed. 3.1
Flexible Use of Airspace (FUA)	Spec-0112 Ed. 1.1
Air-Traffic Services Message Handling System (AMHS)	Spec-0136 Ed. 2.0
On-Line Data Interchange (OLDI)	Spec-0106 Ed. 4.2
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, ETSI)

Table 8: Community Specifications

Produced for the European Commission (January 2018)

For further information, please visit:

EGHD: http://www.eghd-portal.eu/

ICB: http://www.icb-portal.eu/

NCP: http://www.ncp-portal.eu/

NCP NSA Coordination Platform

ICB Industry Consultation Body

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