INTRODUCTION

The Single European Sky ATM Research (SESAR) has become a recognisable brand both in Europe and worldwide, and its values are reflected in the design elements presented in these guidelines.

In its efforts to modernise Europe’s air traffic management network, SESAR focuses on people, collaboration, cost efficiency, capacity, quality, performance and the environment, all aimed at delivering best-in-class innovations in the sector.

WHAT DO THESE GUIDELINES INCLUDE?

These graphical guidelines are those of the SESAR Joint Undertaking and our application of the SESAR logo and branding across our communications material and channels. They provide practical information on the design elements and how they are applied by SESAR JU, but also its members and partners.

SESAR IN A NUTSHELL

We present below the approved ‘boilerplate’ text that all SESAR JU stakeholders are encouraged to use in their communications and press outreach:

As the technological pillar of the Single European Sky initiative, SESAR aims to modernise and harmonise air traffic management in Europe. The SESAR Joint Undertaking (SESAR JU) was established in 2007 as a public-private partnership to support this endeavour. It does so by pooling the knowledge and resources of the entire ATM community in order to define, research, develop and validate innovative technological and operational solutions. The SESAR JU is also responsible for the execution of the European ATM Master Plan which defines the EU priorities for R&D and implementation. Founded by the European Union and Eurocontrol, the SESAR JU has 19 members, who together with their partners and affiliate associations will represent over 100 companies working in Europe and beyond. The SESAR JU also works closely with staff associations, regulators, airport operators and the scientific community.
The dynamic symbols, colours and graphical elements contained in the SESAR logo are intended to reflect and reinforce the values of the organisation.

> dynamism, aperture, impulsion
> aviation & airspace, liberty
> security, guidance and leadership
> green objective
> European (blue and yellow)
> efficiency, seriousness

Please leave some space around the logo equivalent in size to the height of the ‘E’ in the logo.

The minimum size for best visibility is 20mm.

Recommended use for any other application when colours can’t be reproduced and if it’s possible to use the grey levels (newspaper advertising, ...)

Use for fax, stamps, or any other application when colours can’t be reproduced. Screen-printing on surfaces other than paper. This alternative version could be used for engraving or printing in white (in negative), blue or black given the circumstances.

On a dark background, use the logo with white typeface.

A ® version of the logo exists.
MISUSE OF THE LOGOTYPE

It is preferred to use the logo on either a white or blue background. When a coloured background is required, please use either a black or white version of the logo. The SESAR logo must be easily recognised, therefore please avoid cluttering the logo and use only the official versions.

All the components of the SESAR logo are in a fixed relationship and should never be altered, modified or reproduced in any way. Please avoid adding artistic affects.

> Do not erase stars
> Do not use outlines
> Do not use shadows
> Do not use 3D effects
> Do not change the colours
> Do not distort
> Do not rotate
> Do not change the typography
All the rules mentioned in the previous pages apply to the logo of this page.

The SESAR Joint Undertaking logo is built by removing the 4th star in order to add the base line JOINT UNDERTAKING.

USE OF THE LOGO IN PARTNERSHIP

A. MEMBER OF SESAR Joint Undertaking: Contractual relationship with the SJU and member of the Board.

B. SUPPORTED BY SESAR Joint Undertaking: Applicable to SESAR 2020 project consortia.

C. POWERED BY SESAR Joint Undertaking: Applications, procedures or technologies developed under the SESAR programme and put into place in real conditions under the supervision of the SESAR Joint Undertaking.

D. PARTICIPATING IN SESAR Joint Undertaking: Applicable to members and partners of both the SESAR Joint Undertaking and SESAR Deployment Manager.
All applications by SESAR Joint Undertaking must be signed by the following members' logotypes.
**SESARJU CO-BRANDING**

**SESAR 2020 MEMBERS**

Members need to be presented in alphabetical order and preferably on a white background to ensure all logos are visible.

**SESAR 2020 MEMBERS + CO-FUNDING (INCLUDE EU EMBLEM)**

Illustration of how to treat the member logos alongside those of the founding organisations, the European Union and Eurocontrol.

**SESAR 2020 PROJECTS**

This project has received funding from the SESAR Joint Undertaking under the European Union’s Horizon 2020 research and innovation programme under grant agreement [number]

SESAR 2020 beneficiaries should visually reference the SESAR JU and Horizon 2020 when promoting the results of SESAR 2020 projects. This should be done with the EU emblem, reference to the grant and the ‘Supporting SESAR JU’ logo. The display of these references can be done in combination with the project’s own logo (where applicable). See “Communications Guidelines SESAR 2020 Projects” on the SESAR JU extranet for further details.
SESAR JU COLOURS

The colours of the SESAR JU logo are an essential element of its identity:
> blue & yellow (European programme)
> green (environmental concern)

For consistent use of colour, please check the colour references in the chart below.
> PMS: (pantone) references for solid colours. Use for specific cases when the logo needs to be printed only in one colour (blue)
> CMYK: use for printing on quadrichromy (default colours – best choice for all paper-print purposes)
> RGB: use for screen applications (powerpoint)
> WEB: use for web applications (website)

LOGO COLOURS (MAIN)

<table>
<thead>
<tr>
<th>Colour</th>
<th>CMYK</th>
<th>Hex Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>C 100 M 80 Y 0 K 0</td>
<td>#003788</td>
</tr>
<tr>
<td>Yellow</td>
<td>C 10 M 0 Y 0 K 0</td>
<td>#FFDC00</td>
</tr>
<tr>
<td>Green</td>
<td>C 35 M 10 Y 100 K 0</td>
<td>#BECD00</td>
</tr>
<tr>
<td>Blue</td>
<td>C 60 M 0 Y 0 K 0</td>
<td>#7AB51D</td>
</tr>
</tbody>
</table>

SECONDARY COLOURS

<table>
<thead>
<tr>
<th>Colour</th>
<th>CMYK</th>
<th>Hex Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Blue</td>
<td>C 100 M 0 Y 30 K 10</td>
<td>#008FA5</td>
</tr>
<tr>
<td>Green</td>
<td>C 80 M 10 Y 100 K 0</td>
<td>#5D4894</td>
</tr>
<tr>
<td>Grey</td>
<td>C 75 M 0 Y 0 K 0</td>
<td>#F08A00</td>
</tr>
</tbody>
</table>

SPECIFIED COLOURS

KEY FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Colour</th>
<th>CMYK</th>
<th>Hex Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-performing airport operations</td>
<td>C 100 M 0 Y 224 K 0</td>
<td>#009EE0</td>
<td></td>
</tr>
<tr>
<td>Advanced air traffic services</td>
<td>C 80 M 10 Y 100 K 0</td>
<td>#1FA22E</td>
<td></td>
</tr>
<tr>
<td>Optimised ATM network services</td>
<td>C 75 M 0 Y 100 K 0</td>
<td>#5D4894</td>
<td></td>
</tr>
<tr>
<td>Enabling aviation infrastructure</td>
<td>C 0 M 55 Y 100 K 0</td>
<td>#F08A00</td>
<td></td>
</tr>
</tbody>
</table>

INDENTIFY PROJECT STRANDS (WITHIN SESAR 2020)

<table>
<thead>
<tr>
<th>Strand</th>
<th>Colour</th>
<th>CMYK</th>
<th>Hex Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploratory research</td>
<td>C 60 M 0 Y 100 K 0</td>
<td>#7AB51D</td>
<td></td>
</tr>
<tr>
<td>Industrial research</td>
<td>C 100 M 0 Y 30 K 0</td>
<td>#008FA5</td>
<td></td>
</tr>
<tr>
<td>Large-scale demonstration</td>
<td>C 100 M 80 Y 0 K 0</td>
<td>#003788</td>
<td></td>
</tr>
</tbody>
</table>
SESAR uses three main typefaces depending on where it appears, as shown here. These typefaces are classified as main and alternative typings according to the their usage. Both of typefaces come in a variety of weights offering a flexible use.

**DIN PRO (DTP AND MAIN USE)**

ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789 , ; : ? @
abcdefghijklmnopqrstuvwxyz

**CALIBRI (MICROSOFT OFFICE AND EMAIL)**

ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789 , ; : ? @
abcdefghijklmnopqrstuvwxyz

**LATO (WEB DESIGN)**

ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789 , ; : ? @
abcdefghijklmnopqrstuvwxyz
SESARJU DESIGN ELEMENTS

KEY FEATURES

- High-performing airport operations
- Advanced air traffic services
- Optimised ATM network services
- Enabling aviation infrastructure

SESAR activities and solutions are categorised according to four key areas of ATM (i.e. their key features).

DELIVERING PERFORMANCE

- Fuel consumption and emission per flight
- Air navigation service costs
- Flight time variance
- Safety
- Airport capacity
- TMA capacity
- En-route capacity

Performance is at the heart of SESAR activities, and can be grouped according to several key performance areas.
IMAGE DESIGN ELEMENT

Why clip or cut the corner? This is a little design element to help distinguish SESAR branding in publications and communications. It applies to square and rectangular shaped imagery, and the size of the cut should be proportionate to the image size and always at a 45 degree angle.

The clip or cut-out of the corner of square or rectangular imagery should be proportionate to its size, as shown in these examples.
SESAR JOINT UNDERTAKING / GRAPHICAL GUIDELINES

SESARJU IMAGERY

CLEARSKY & PLANES

KEY WORDS:
Clear sky / Planes / Open spaces / Clear / Pure / Blue / White / Skyline / Security / Tranquility / Freshness
AIRPORTS & PLANES (TECHNICAL)

KEY WORDS:
Technical / Engine / Take off / Landing / Control / Security / Runway / Air traffic
ENVIRONMENTAL

KEY WORDS:
Nature / Environmental impact / Green objectives / Decarbonisation / Fuel efficiency
SPECIFIC

To brighten presentations and other forms of communications, choose images that closely depict the topic, depending on the key message of the respective page.
PREFER: Aspirational and aesthetic images
AVOID: Fancy, highly conceptual images / 3D pictures / compact drawings and charts where the details cannot be discerned
BUSINESS CARD (85MM X 55MM)

Surname NAME
Title
Avenue de Cortenbergh 100 / B-1000 Bruxelles
T. +32 2 000 00 00 / name@sesarju.eu
@SESAR_JU / www.sesarju.eu
LETTERHEAD A4 (297MM X 210MM)
SESARJU STATIONARY

ENVELOPES US (229mm X 114mm)

ENVELOPES C4 (324mm X 229mm)
Dear Sir/Madam,

Ommolor il elesequati o dit alis am, velenisci erillan u lputpat ulla feu faccum vero dolorores, cones. Equisim voluptat. Met ad tsd el in henibh ex ensit lutat, vel irillam illan exeros num quis nostis nim zrillaooreet alit verim ing ex euisl ut inim vel iusto consent adiamet adiamzrissilam, sum ero dionsent lutat autat ex eugait wis niat noste feum vel iure magniman velis num vel iure magnim dolorper inim zrilit atte diamcon sequam am iristnim quisim nim essi eros nonseed eu faccum.

Dolesti e facil ilit adiaturerit nummy nummy nonsenis asi ero conseuquam, quamcon uputem diupi delisim dit lorer inci ti onsequip esseed eu feu feum zriuiuadr molore delenibh ex
exeriure mod te tatin henibh er ad ming ercillam do eugait ins ent lutpat ut ipit praessi.

Dommolor il elesequato dit alis am, velenisci erillan u lputpat ulla feu faccum vero dolorores, cones. Equisim voluptat. Met ad tsd el in henibh ex ensit lutat, vel irillam illan exeros num quis nostis nim zrillaooreet alit verim ing ex euisl ut inim vel iusto consent adiamet adiamzrissilam, sum ero dionsent lutat autat ex eugait wis niat noste feum vel iure magniman velis num vel iure magnim.

Dolorper inim zrilit atte diamcon sequam am iristnim quisim nim essi eros nonseed ex faccum dolestie facil ilit adiaturerit nummy nummy nonsenis asi ero conseuquam.

Dionsent Lutat Autat
<NAME OF THE PROJECT>
this is a <title>
Safety Analysis <Subtitle>

B1 DEMONSTRATION REPORT

Edition Date: 31 December 2016
Project Number: <INSERT NUMBER>
Project Manager: <NAME OF ORGANISATION>
Edition: 01.01.00.
<NAME OF THE PROJECT>
this is a <title>
Safety Analysis <Subtitle>

B1 DEMONSTRATION REPORT <TYPE OF DOCUMENT>

31 December 2016
Project Number: 01.05
Project Manager: NAV CANADA
 Edition 01.01.00

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No [number]. This [infrastructure][equipment][insert type of result] is part of a project that has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No [number].

Abstract

This document describes the context, demonstration, results, communication and implementation activities that were undertaken to deliver and share the ENGAGE Project II primary objectives which were to:

- Expand the operational arena of ENGAGE I AIRE project by adding to the operational airspace and to the pool of participating operators enabling at least 75 trial flights in single and multi-flight scenarios
- Demonstrate that the ENGAGE variable Mach, variable flight level procedures on the North Atlantic are sustainable and safe
How to make a presentation using SESAR 2020 Theme

Mr Person Person
Graphic Designer

Luxembourg 2 of February 2016

SESAR built-in slide layout
- Base the slides of your layout on one of the custom-designed layouts. This will ensure that the placement of elements, colours and formatting are consistent throughout the presentation.
- Choose a built-in slide layout (theme/ template) or duplicate one of the slides in the template (template is slide master view) and edit as required.

Examples of diagrams

- Virtualisation
- Automation support
- Integrated systems
- Integration of all vehicles
- Sharing of information
- Flight and flow centric operations

Thank you very much for your attention!
SESARJU DESIGN

Designs help readers quickly and easily identify and associate the content and the brand to SESAR in all communication channels, internal and external. Some special features are explained in the following pages.

COVER

Try to maintain a white margin around the page for a clean and consistent look.

The plane feature symbolises take-off and flight, maintain an appropriate upward trajectory when using this element.

Title in white
DIN Pro bold
DIN Pro regular

The white inset is practical and symbolic. It allows the logo to be positioned within (in a suitable size for the space allowed) and it symbolises flight (i.e. aircraft wing or tail).
The angles and colours in the design allow for dynamic layering. Note the left to right inclination of the angles in varying degrees between the blues and the green.
The number of passengers passing through the world’s airports will double over the next twenty years at current annual growth rates. Aviation is a hugely important global market and it is important that Europe plays a full role in the sector. In Europe, we need to ensure we deliver to our citizens and stakeholders a more and better connected air transport network, and enable the competitiveness of industry for a sustainable growth.

The SESAR (Single European Sky ATM Research) project has an important role in strengthening the European aviation sector through the modernisation of air traffic management. One of the most important outcomes of the project has been the development of partnerships which link aviation stakeholders in a common desire to maintain and even improve air transport’s safety levels, while making it more punctual, more affordable and all with an improved environmental footprint.

With the establishment of the SESAR Joint Undertaking (SESAR JU) in 2007 by the European Union and Eurocontrol, the ATM community was tasked to develop the technical and operational solutions to overcome fragmentation and meet the performance requirements for the future air traffic management system. The definition and development of these solutions, which are now beginning to be deployed across Europe, is a testament to that original vision of the Single European Sky articulated by Transport Commissioner Loyola de Palacio in 1999.

This vision has now become a reality thanks to the commitment and cooperation of the ATM community. The following pages illustrate just how complex a challenge the ATM community faced in developing the technical and operational solutions to overcome fragmentation and meet the performance requirements for the future air traffic management system.

It is only by working more closely together that we will be able to exploit these reserves. If we are to meet the targets set for the future performance of the European air traffic management system we will have to ensure that we are properly able to exploit the benefits of ATM improvements.

MESSAGE FROM THE FOUNDING MEMBERS

HENRIK HOLOLEI
Director General, Directorate-General for Mobility and Transport, European Commission, and Chairman of the SESAR Joint Undertaking Administrative Board

This illustrates the use of grids and importance of aligning content elements on each page, including text, images, titles and captions. In this case content is divided into four active grid lines. Note the cut out of the image corner, even for head-and-shoulder shots. The body text is justified, which looks neater, but this is not a pre-requisite.
Aviation and air traffic management matter for the European economy, which is why the Single European Sky ATM Research (SESAR) project is so important. There are 27,000 flights passing through Europe daily, representing 26% of the world market. The sector directly employs 2 million European citizens and contributes EUR 115 billion to EU GDP. It ensures that remote areas of Europe can stay connected and benefit from industries such as tourism.

Innovation is a core enabler to ensure that the aviation industry continues to thrive. The SESAR Joint Undertaking (SESAR JU) is a perfect example of how to effectively pool private and public resources and know-how to achieve progress. As this book shows, in a relatively short time frame, the SESAR JU has created an unprecedented collaborative platform which is delivering deployable solutions.

Further research is planned by the SESAR JU on how to unlock the potential of technology, while Europe-wide deployment is well under way by the Deployment Manager. It is important that we build on this successful approach in the coming years in order to better serve the needs of people and business.
For more than 50 years airports have relied on instrument landing systems (ILS) to provide pilots with approach and landing guidance in low-visibility conditions, such as heavy rain and low cloud. Although the system has proved to be reliable and functional, ILS is costly to maintain and has operational limitations that reduce runway capacity in certain conditions. It is no surprise then that airports are turning to other solutions, such as ground-based augmentation of satellite navigation systems (GBAS), to meet their capacity needs and reduce delays and disruptions for airspace users and passengers.

GBAS uses four global navigation satellite system (GNSS) reference receivers and a VHF broadcast transmitter system. Its ground system measures distances to GNSS satellites (e.g. Galileo), and computes error corrections and integrity data based on signal quality and known fixed positions of the GNSS reference receivers. Together with the approach path and quality information the corrections are broadcast as digital-coded data to all GNSS landing system (GLS) equipped aircraft within range. The aircraft receives this information, calculates the (differentially) corrected position and deviations from the selected approach path, allowing it to land automatically in low-visibility conditions.

GBAS CAT II/III can enable precision landing in low-visibility conditions, helping to maintain safety and capacity performance. SESAR validations have shown that the GBAS CAT II/III can overcome challenges posed by low-visibility conditions, reducing runway blocking times and thereby increasing arrival capacity by between two and six aircraft per hour compared to ILS.

Over 90 flights were conducted using several prototype systems, and the results are being used to help develop common standards at an international level. The work continues in parallel with the development of airborne GNSS landing system (GLS) avionics required for GBAS-controlled landings. Assuming that standardisation and regulation progress as planned, the entry into service of GBAS Category II/III.

SATELLITES DELIVER PRECISION
LANDING GUIDANCE

This page demonstrates the handling of various elements, including the icons, shaded header, side-bar column to the right and pull-quotes or in-text testimonials/quotes.
Today, aircraft making their final approach to land are obliged to maintain minimum separation distances. These distances are fixed whatever the wind conditions. When keeping to these distances in strong headwinds longer gaps of time develop between aircraft. This means fewer flights landing per hour reduce airport capacity, leading to delays and increased holding at busy times, which results in increased fuel burn.

SESAR’s time-based separation (TBS) replaces current distance separations with time intervals in order to adapt to weather conditions. It provides consistent time-based spacing between arriving aircraft in order to maintain runway approach capacity.

The TBS software uses real-time information about the weather, airspeed, ground speed, heading and altitude to display time-based separation and arrival speed information to the approach controller. No changes are required on board the aircraft, but the controller uses the real-time separation indicators to manage the final approach separations.

TBS research included analysis of the arrival paths of over 100,000 aircraft using state-of-the-art equipment to measure the behaviour of aircraft wake vortices. The procedure now is in daily use at London Heathrow, where, in strong wind conditions, it delivers up to five additional aircraft landings per hour compared to traditional distance-based separation procedures. TBS results in average reduction of 0.9 minutes holding time, and an average reduction of 1.4 minutes between stack entry and touchdown times.

The SESAR Solution is available for industrialisation. TBS entered into full-time service at London Heathrow in March 2015. The solution is due for synchronised deployment across Europe in accordance with the Pilot Common Project.

**CAPACITY GAINS WITH TIME-BASED ARRIVALS**

- Improved airport capacity as a result of increased aircraft landing rates in strong headwind conditions
- Reduction in holding times as well as stack entry to touchdown times
- Increased situational awareness

**STAKEHOLDERS**
- ANSP
- AO

**BENEFITS**
- **Improved** airport capacity as a result of increased aircraft landing rates in strong headwind conditions
- **Reduction in** holding times as well as stack entry to touchdown times
- **Increased situational awareness**

Analysis has shown that there has been no increased risk to wake turbulence encounters, and no increase in the number of go-arounds following introduction of time-based separation at London Heathrow.

The SESAR Solution is available for industrialisation. TBS entered into full-time service at London Heathrow in March 2015. The solution is due for synchronised deployment across Europe in accordance with the Pilot Common Project.
Discover how SESAR is helping to make way for the Single European Sky

Forewords

A year ago, the First Flight Trial of SESAR 2020 were not just a key moment in the delivery of the SESAR 2020 solution but also a major milestone towards the Single European Sky. The demonstration campaign, conducted in 2015, showcased how a new approach to managing flights in the airspace over Europe can make a real difference to all stakeholders, passengers, and aviation operators.

The SESAR Joint Undertaking (€U) was established in 2007 as a public-private partnership to support the Single European Sky initiative, SESAR. As the technological pillar of the Single European Sky implementation, SESAR brings a wide range of innovative solutions to the European ATM community.

As the technological pillar of the Single European Sky, SESAR plays a critical role as the聚焦点 and harmonizing diverse modernization actions in the ATM community.

The SESAR Deployment Manager (SESAR DM) coordinates the implementation of SESAR R&I activities within SESAR 2020. The SESAR DM is also responsible for the execution of the SESAR Deployment Programme of SESAR 2020.

Therefore, it is crucial that the co-funding of air traffic management (ATM) challenges. 2016 also saw the launch of SESAR 2020, another significant innovation (R&I) programme.

In 2016, 28 projects were completed, showcasing seamless integration of automated decision making and operation management, and technology.
GRAPHICAL GUIDELINES / SESAR JOINT UNDERTAKING

OCTOBER / NOVEMBER / DECEMBER

- Deployment Programme 2016 delivered to the European Commission
- SESAR DM: High Level “SWIM Action Plan” delivered
- Memorandum of Understanding between the SESAR DM and Boeing was signed
- SESAR DM: Three grant agreements were signed for a total of EURO 525 million projects to modernise the European airspace
- SESAR Drone Outlook Study published, providing a snapshot of the drone landscape in 2050 and how new markets will unfold
- Drone demonstration projects published; feasibility tests showing how these vehicles can be safely integrated into civil airspace
- SESAR JU and European Aviation Safety Agency signed MoC for collaborating on SESAR 2020
- 25 projects earmarked to receive around EUR 260 million by SESAR members and Horizon 2020 for first-wave SESAR 2020 industrial research and large-scale validation tests/actions

COMING UP IN 2017

- Open call for exploratory research and very-large scale demonstration projects launched with EUR 28 million budget
- Signature Memorandum of Understanding between the SESAR DM and Airbus SAS
- The “Data Link Services Recovery Plan” was referred to as a priority in the CEF Transport Call 2016
- SESAR DM was appointed as Data Link implementation project manager
- SESAR DM spoke at the 2nd EU Aeronautics Conference in the indispensable dialogue between the European decision-makers and the high-level industrial stakeholders in order to prepare the future of the European aeronautics industry

COMING UP IN 2016

- Launch of next wave of SESAR 2020 exploratory research and large-scale demonstration projects
- Launch of European ATM Master Plan update (end of 2017)
- Update of regulatory and standardisation roadmaps
- Elaboration of the Data Link Services Programme
- Pilot Common Project review
- The coordination of the application to the future call 2017

COMING UP IN 2015

- SESAR 2020 launched latest edition of the European ATM Master Plan published
- Wide-scale deployment of SESAR across Europe starts

2014

- Establishment of the SESAR Joint Undertaking for coordinating and concentrating all relevant ATM research and development efforts in the EU. The SJU has a current mandate until 2024.
- SESAR 2020 launched latest edition of the European ATM Master Plan published

2013

- Delivery of a first set of SESAR Solutions by SJU for deployment
- Council resolution on the endorsement of the European ATM Master Plan

2009

- Establishment of SESAR as the technological pillar of the Single European Sky (SES)
- Council resolution on the endorsement of the Single European Sky (SES)

2007

- Establishment of SESAR in the Single European Sky (SES) with a current mandate until 2024.
- SESAR JU completes first R&I programme and delivers Solutions Catalogue

2004

- SESAR - NextGen State of Harmonisation Report published, reflecting current and planned EU-US collaboration efforts to harmonise and modernise trans-Atlantic ATM, and support International Civil Aviation Organisation’s Global Air Navigation Plan and Aviation System Block Upgrade programme

2002

- Council resolution on the endorsement of the Single European Sky (SES)
SESARJU DESIGN

SESARJU 2020 ROLL-UP

High performing aviation for Europe
Addressing the needs of the entire ATM community

SESAR Solutions have been categorised according to four key areas of ATM (key features):

- High-performing airport operations
- Advanced air traffic services
- Optimised ATM network services
- Enabling aviation infrastructure

**WHO BENEFITS?**

SESAR Solutions meet the business needs of a range of ATM stakeholders. For each solution, the stakeholders targeted by the solution are indicated using the following key:

- ANSP: Airspace navigation service providers (civil and military)
- AO: Airport operators (civil and military)
- AU: Airspace users (civil and military)
- NM: Network Manager

**NOTE**

The Solutions Catalogue is a series and has established its own style and design points, which makes it something of an exception to the SESAR JU Graphical Guidelines.

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**SPECIAL CASE (SESAR SOLUTIONS CATALOGUE)**

The Solutions Catalogue is a series and has established its own style and design points, which makes it something of an exception to the SESAR JU Graphical Guidelines.
NOTES

Another special case is the design features created for the World ATM Congress (WAC).
What is the vision of the 2015 Master Plan?

Building on the 2012 edition of the Master Plan, this edition outlines the vision to achieve ‘high-performing aviation for Europe’ by 2035. The vision reflects the goals captured in the SES II initiative, which calls for ‘more sustainable and better performing aviation’ (2) and Flightpath 2050 — Europe’s Vision for Aviation (3), which states that in 2050, ‘the European aviation community leads the world in sustainable aviation products and services, meeting the needs of EU citizens and society’.

The vision builds on the notion of ‘trajectory-based operations’ and relies on the provision of air navigation services (ANS) in support of the execution of the business or mission trajectory — meaning that aircraft can fly their preferred trajectories without being constrained by airspace configurations. This vision is enabled by a progressive increase of the level of automation support, the implementation of virtualisation technologies as well as the use of standardised and interoperable systems. The system infrastructure will gradually evolve with digitalisation technology, allowing air navigation service providers (ANSPs), irrespective of national borders, to plug in their operations where needed, supported by a range of information services. Airports will be fully integrated into the ATM network level, which will facilitate and optimise airspace user operations. Going beyond 2035 towards 2050, performance-based operations will be implemented across Europe, with multiple options envisaged, such as seamless coordination between ANSPs or full end-to-end ANS provided at network level.

Furthermore, it is widely recognised that to increase performance, ATM modernisation should look at the flight as a whole, within a flow and network context, rather than segmented portions of its trajectory, as is the case today. With this in mind, the vision will be realised across the entire ATM system, offering improvements at every stage of the flight.

Reaching the performance ambition will also require a change in the way ANSPs are deployed, as well as possible evolutions in the way services are provided. Through a four-phase approach, this change would be the high-level ATM gradually moving from locally specific and ANSP-centric infrastructure at network level and evolve to an infrastructure at regional or network level (see Chapter 2).

A5 Harmonising risk assessment

Description
Up until now, the US and Europe have been successful in mitigating known risks to harmonisation. However, both sides have agreed to now formally define a process for identifying and prioritising new risks and to add harmonisation risk assessment to their internal and cooperative processes.

Rationale for harmonisation
When looking into GANP Block 2 and 3 timeframes, NextGen and SESAR may identify issues with the applicability of standards or even missing standards. In such cases, it must be determined whether the new or amended standards should be only regional in nature or whether they should be addressed more globally to ensure alignment with the GANP. Should the standards be considered globally relevant, NextGen and SESAR would initiate research and/or standards bodies would be asked to take action to ensure the standards are harmonised.

Status and next steps
The development of the process is well underway, with the first assessment to be conducted by January 2017 and annually thereafter. Risks impacting research, standards development and deployment will be assigned to the respective coordination plans of the MoC.

NOTE A final exceptional case is the NEXTGEN document which is a joint output by EU and FAA partners.