

sesar 

AIRSPACE  
WORLD 2024



# SESAR Walking Tours

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## SESAR Walking Tours at Airspace World 2024

Join SESAR members and partners at Airspace World to see first-hand some of the success stories from SESAR research and innovation, as well as those from SESAR deployment.

Please note that registration to the tours is not necessary, participation will be granted on a first-come-first-served basis.

Tours are limited to a maximum participation of 50 persons. Early check-in is advised to avoid disappointment.

### AGENDA OVERVIEW

#### Tuesday 19 March 2024

**09:45 – 11:15**    **AIR-GROUND INTEGRATION AND AUTONOMY**

**10:45 – 12:20**    **AVIATION GREEN DEAL**

**14:15 – 16:05**    **CONNECTED AND AUTOMATED ATM**

**15:30 – 17:15**    **ARTIFICIAL INTELLIGENCE**

#### Wednesday 20 March 2024

**10:00 – 11:30**    **U-SPACE/AIRSPACE RECONFIGURATION**

**11:30 – 12:45**    **VIRTUALISATION AND CYBER-SECURE DATA SHARING**

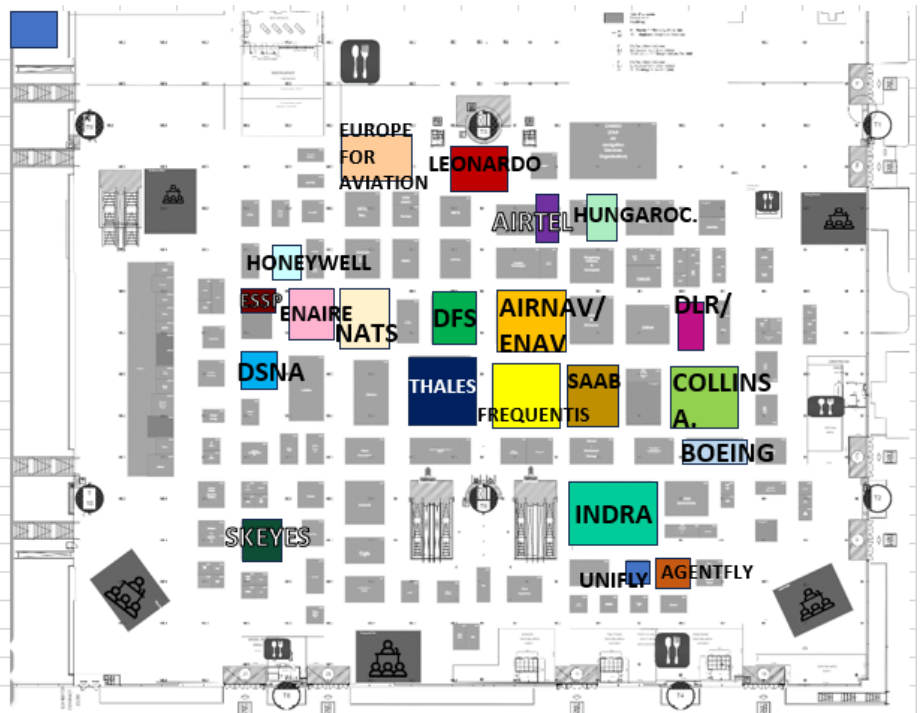
**14:00 - 15:45**    **U-SPACE**

**14:30 – 16:00**    **REMOTE TOWERS**

**15:45 – 16:45**    **NEW OPPORTUNITIES FOR A DIGITAL EUROPEAN SKY**

## SESAR JU partners @Airspace World

Name	Number of Stand
IDS AIRNAV	H33
ENAV	H33
AIRTEL	H43
Boeing	C24
Collins Aerospace	C26
DFS	J33
NLR	D34
DLR	D34
DSNA	O29
ENAIRE	M34
FREQUENTIS	H25
Honeywell	N40
HungaroControl	F44
INDRA	E14
Leonardo	I47
SAAB	F26
Thales	J25
Europe for Aviation	H22
NATS	M32
AgentFly Technologies	D10
Skeyes	O11
ESSP	O37
Unify	E10



## Europe for Aviation stand #H22



## AIR-GROUND INTEGRATION AND AUTONOMY

19 March, 09:45 – 11:15

Greater air-ground integration requires advanced and flexible means of communication including satellite-based solutions, high bandwidth mobile networks and IP-based technology. SESAR aims to deliver a multilink environment to support future hyper-connected and trajectory-based operations. This tour will present preparations to deploy more advanced downlinking capabilities and flexible means of communications, paving the way towards more sustainable and efficient operations.

*Tour guide: Nil Agacdiken, SESAR JU*

Time	Topic	Description
09:45 – 10:00	<b>INTRODUCTION</b> <i>Nil Agacdiken, SESAR JU</i>  Stand: Europe for Aviation - H22	Check-in and introduction
10:00 – 10:15	<b>Trajectory synchronisation and system wide information management</b> <i>Antonio Strano, Leonardo</i>  Stand: Leonardo – I47	Trajectory-based operations (TBO) is a cornerstone of the SESAR vision, paving the way for more predictable air traffic management. Find out more about the work of Network TBO, which aims to deliver several solutions to enable trajectory-based operations during the planning and execution phases, taking a network view. The tour will present the SESAR JU project's work on message exchanges between air traffic control centres using system-wide information management (SWIM).  (SJU Project ID: Network TBO)
10:15 – 10:30	<b>LDACS for communications and integrated CNS</b> <i>Peter Leydold, Frequentis</i>  Stand: Frequentis - H25	Find out about the FCDI project and the latest research on L-Band Digital Aeronautical Communication System or LDACS – the future terrestrial data link, as well as flight tests addressing specific communications protocols, such as aeronautical telecommunication network open systems interconnection (ATN/OSI) and internet protocol suite (ATN/IPS).  (SJU Project ID: FCDI - Future Connectivity and Digital Infrastructure)
10:30 – 10:45	<b>Getting close and digital with LDACS</b> <i>Simona Pierattelli, Leonardo</i>  Stand: Leonardo - I47	Get a closer look at the Leonardo LDACS ground system and its technology features. FCDI is using the prototype to validate performance requirements and interactions with other systems, which includes air and ground solutions converging towards a common infrastructure and a unified concept of operations.  (SJU Project ID: SESAR3 FCI / LDACS)
10:45 – 11:00	<b>ADS-C/EPP and the tale of trajectory transformation</b> <i>Peter Lubrani, ESSP</i>  Stand: ESSP - 037	Automatic dependent surveillance – Contract (ADS-C) enables aircraft to automatically transfer accurate trajectory information from the flight management system to the ground, known as the extended projected profile (EPP). Find out more about ADS-C and the work of ADSCENSIO, a now completed very large-scale demonstration, which evaluated and further developed the ADS-C common service solution supporting tests and exercises in real-operational environments. The visit will also delve into the latest developments of the ADS-C and CS common services by the HERON Digital Sky Demonstrator.  (SJU Project ID: ADSCENSIO-HERON)
11:00 – 11:15	<b>AF6/ADSC-EPP deployment activities</b> <i>Cristian Pradera, SESAR Deployment Manager</i>  Stand: Europe for Aviation - H22	AF6/ADSC-EPP deployment activities

## AVIATION GREEN DEAL

19 March, 10:45 – 12:20

The European Green Deal aims to make Europe the world's first climate-neutral continent, committing all member states to more sustainable operations. Aviation is responding by intensifying efforts to reduce emissions and improve fuel efficiency through optimised flight profiles and higher levels of automation. However, flying more direct routes relies on introducing new concepts and capabilities and widespread adoption of digital technologies. The tour will give visitors a taste of the innovation and deployment activities that are supporting Europe's net zero ambitions.

*Tour guide: Olivia Nunez, SESAR JU*

Time	Topic	Description
10:45 – 11:00	<b>INTRODUCTION</b> <i>Olivia Nunez, SESAR JU</i> <b>Stand:</b> Europe for Aviation - H22	Check-in and introduction
11:00 – 11:15	<b>Wake energy retrieval: a sea change for transatlantic flights?</b> <i>Andreas Petrikat, NATS and Laura Montironi, AIRBUS</i>  <b>Stand:</b> NATS – M32	Like a bird, a moving airplane leaves a wake of disturbed air, creating an updraft that allows the following aircraft to cut down on engine thrust, fuel use and emissions. The GEESE project is developing concepts of operation to introduce this principle of wake energy retrieval (WER) in air traffic operations. It has been recognised early on that the traffic flow in the North Atlantic presents a great number of opportunities to be leveraged for WER operation. Please join us to explore how Airbus, NATS and many other partners to make WER operational for transatlantic flights, spearheading the efforts to improve the sustainability of long-haul air traffic.  (SJU Project ID: GEESE)
11:15 – 11:35	<b>A birdseye view of wake energy retrieval in continental Europe</b> <i>Daniel Eduardo COBOS MEZA, Frequentis</i>  <b>Stand:</b> Frequentis H25	The ambition of GEESE is to see WER operational worldwide, enabling all opportunities to be realised. Find out how Frequentis is supporting the collaboration with some of the automation solutions under development to enable the deployment of the concept in continental traffic flows, particularly in Europe.  (SJU Project ID: GEESE)
	<b>Fit for the digital age: lean arrivals, dynamic routes</b> <i>Fabio Mangiaracina ENAV, Micheal Kupfer, Frequentis</i>  <b>Stand:</b> Frequentis - H25	The GALAAD SESAR JU project is developing a concept for dynamically allocating required navigation performance (RNP) routes in the terminal area. Linked to this, the project will work on the decision-support tool, AMAN – Arrival Manager, in order to enable agile responses to variations of operational conditions/regimes in the terminal area such traffic density, airspace availability and environmental. Find out more about plans and activities of this recently launched project, which aims to improve fuel efficiency and environmental sustainability without negatively impacting capacity.  (SJU Project ID: GALAAD)
11:35 – 11:50	<b>Deep dive into dynamic route structures</b> <i>Micheal Kupfer, Frequentis</i> <b>Stand:</b> Frequentis -H25	Get a chance to dive deeper into the details of the GALAAD concept for dynamic required navigation performance (RNP) route allocation in the terminal maneuvering area (TMA). The visit will demonstrate automated control functions for arrival management.  (SJU Project ID: GALAAD)
11:50 – 12:05	<b>Fuel efficiency and the art of adaptation</b> <i>Patrick Boulet, DSNA, DTT</i>  <b>Stand:</b> DSNA – O29	In nature, herons are graceful birds known for their ability to adapt with ease to changing environmental conditions. In aviation, HERON is the name given to a Digital Sky Demonstrator on more fuel-efficient flight operations. Partners in the demonstrator, DSNA, will present a series of use cases to illustrate how the introduction of optimised air traffic management operations and new technologies can mitigate aviation's environmental footprint and reduce fuel consumption and emissions. The visit will include a demo with a live display of data exchange between air and ground (ADS-C/EPP).  (SJU Project ID: HERON)
12:05 – 12:20	<b>Cracking the non-CO2 conundrum</b> <i>Andreas Petrikat, NATS and Philippe Masson, AIRBUS</i>  <b>Stand:</b> NATS – M32	The CICONIA project is exploring the non-CO2 impacts of aviation and developing reliable measurement and mitigation measures. In particular, the project is addressing the effects of persistent contrails, with potential solutions identified through operational mitigation measures such as trajectory optimisation. Get insights into the ongoing efforts in crafting environmentally impactful, economically balanced, and operationally viable mitigation measures.  (SJU Project ID: CICONIA)

## CONNECTED AND AUTOMATED ATM

19 March, 14:15 – 16:05

The future ATM system will deliver hyper connectivity between all stakeholders (vehicle-to-vehicle, vehicle-to-infrastructure) via high bandwidth, low latency fixed and mobile networks. Highly automated systems with numerous actors will interact with each other seamlessly, making the system scalable and even safer than today. The tour will zoom in on some of the research, innovation and deployment activities, which are delivering the components for greater automation and connectivity.

*Tour guide: Ramon Raposo, SESAR Deployment Manager*

Time	Topic	Description
14:15 – 14:30	<b>INTRODUCTION</b> <i>Ramon Raposo, SESAR Deployment Manager</i> <b>Stand:</b> Europe for Aviation - H22	Check-in and introduction
14:30 – 14:55	<b>The dynamic symphony of air traffic management</b> <i>Giuseppe Di Bitonto, IDS Airnav &amp; Patrizia Criscuolo, ENAV</i> <b>Stand:</b> ENAV – H33	Managing airspace in a more dynamic way, for example by designing sectors based around predicted traffic flow, can increase capacity while reducing delays and emissions. The SESAR solution “dynamic airspace configurations (DAC)” allows ANSPs to organise, plan, and manage airspace configurations with enough flexibility to respond to changes in traffic demand. Get a closer look at the DAC solution and hear what operations staff have to say about it. Find out about plans to enhance the solution with new features, such as the local traffic load management tool (LTLMT).  (SJU Project ID: HARMONIC / SJU Project ID: PJ.09-W2-44)
14:55 – 15:05	<b>Europe’s skies dynamic balancing act</b> <i>Natividad Valle Fernández, ENAIRE</i> <b>Stand:</b> ENAIRE – M34	Join ENAIRE for a demo of its sector configuration plan optimiser, developed within the framework of the dynamic airspace configuration solution. Find out about plans by SESAR projects ISLAND and HARMONIC, to integrate new additional features such as configuration pathway and resilience indicators.  (SJU Project ID: HARMONIC, ISLAND / SJU Project ID: PJ.09-W2-44)
15:05 – 15:20	<b>HYPERSOLVER: cracking complex operations</b> <i>Aurelie Peuaud, ENAC</i> <b>Stand:</b> DSN – O29	In air traffic flow management (ATFM), measures are issued when traffic demand exceeds capacity usually in advance of take-off. Controllers then give different aircraft instructions to separate them when airborne. The challenges facing ATFM and air traffic control may differ and solutions to them are often developed in isolation of one another. Find out about the HYPERSOLVER project, which aims to develop an AI-enabled end-to-end “hyper solver” tool to manage short and medium-term conflicts.  (SJU Project ID: HYPERSOLVER)
15:20 – 15:35	<b>On the radar: Flight centric operations</b> <i>Přemysl Volf, AgentFly Technologies</i> <b>Stand:</b> AgentFly Technologies – D10	European airspace is divided into flight information regions, which are subdivided into sectors to provide safe separation services for aircraft travelling through the airspace. Changing this to a Flight Centric structure without reference to geographical sectors opens up the opportunity to distribute the traffic more evenly, and to avoid lost productivity in underloaded sectors. Join us to find out more about this game-changing concept and see simulations of how it may work at country (FIR) and Europe-wide levels.  (SJU Project ID: FCA)
15:35 – 15:50	<b>MIAR in a nutshell: Making I-CNS A Reality</b> <i>Florian Selig, DLR Institute of Communication and Navigation</i> <b>Stand:</b> DLR - D34	Get an overview of the MIAR project, which is focusing on the capabilities of the L-band digital aeronautical communication system (LDACS) in supporting CNS services on aircraft. In parallel, the project will also present the integration of multiple modularly complementary navigation technologies such as e-DME, Terrain Aided Navigation and Radar Based Navigation at FMS level. MIAR will specifically demonstrate the navigation function in LDACS and the other technologies through real-time flight experiments.  (SJU Project ID: MIAR)
15:50 – 16:05	<b>Resilient ATM system development powered by European ATM R&amp;D</b> <i>András Heisig, Head of ANS System Development Division</i> <b>Stand:</b> HungaroControl - F44	HungaroControl explains how continuous innovation enabled the Hungarian ANSP to create one of the most advanced ATM systems in the world with the support of SESAR. You will hear and experience how we actively shape the Single European Sky: <ul style="list-style-type: none"> <li>• Pioneering Free Route Airspace locally and regionally</li> <li>• MATIAS Build 12 &amp; 13 features and development milestones</li> <li>• Our vision for the future of ATM systems</li> </ul> (SDM Project ID: FRA)

## ARTIFICIAL INTELLIGENCE

19 March, 15:30 – 17:15

ATM is an ideal candidate for greater automation and augmentation through AI. With their repetitive procedures generating huge amounts of data, aviation and ATM can make use of AI and higher levels of automation to improve the efficiency of their operations in many ways and allow human operators to focus on safety-critical tasks. This tour will present a flavour of the operational use cases where artificial intelligence applications are being trialled through research and innovation, as well as some of the challenges facing acceptance and implementation of this promising technology.

Tour guide: Olivia Nunez, SESAR JU

Time	Topic	Description
15:30 – 15:45	<b>INTRODUCTION</b> <i>Olivia Nunez, SESAR JU</i>  <b>Stand:</b> Europe for Aviation - H22	Check-in and introduction
15:45 – 16:00	<b>Finding zen in the control room</b> <i>Christophe Hurter, ENAC</i>  <b>Stand:</b> DSNA – O29	Air traffic control is reputed as one of the five most stressful professions there is. Addressing the mental workload of controllers is therefore an important area of SESAR research and innovation and one that can be addressed using artificial intelligence. Find out about the CODA project, which aims to develop an adaptive digital assistant capable of predicting future traffic, assessing controllers' stress levels and, and activating an adaptation strategy.  (SJU Project ID: CODA)
16:00 – 16:15	<b>Getting AI-head of the weather</b> <i>Aniel Jardines, AI Methods</i>  <b>Stand:</b> DSNA – O29	Bad weather can play havoc with the best-laid plans. This is especially true in air traffic management, where poor meteorological conditions are a primary cause for traffic delays in Europe. Performing better during adverse weather relies on timely and accurate forecasts. Get a taste of what's in store with the KAIROS project, which is developing a weather forecasting platform designed to enhance predictability of diverse weather phenomena impacting aviation. See firsthand the project's prototype which aims to help aviation stakeholders to strategically plan and minimise disruptions to their operations.  (SJU Project ID: KAIROS)
16:15 – 16:30	<b>Digital assistants: Smells like team spirit</b> <i>Gianluca Marrazzo, Leonardo</i>  <b>Stand:</b> Leonardo – I47	By teaming up with their human counterparts (pilots, ATC operators, airport operators), digital assistants (DAs) can support the execution of tasks to ensure safe and efficient operations in complex scenarios. Get insights into the JARVIS project and its preliminary prototyping of an ATC digital assistant, which features among other things an AI-powered conflict resolution and advisory tool (CORA) on the controller's working position.  (SJU Project ID: JARVIS)
16:30 – 16:45	<b>Certifying the future of ATM</b> <i>Mohsan Jameel, DLR</i>  <b>Stand:</b> DLR – D34	The adoption automated technologies, enabled by artificial intelligence, raises new challenges around liability and certification that must be addressed at the point of design. Meet DLR experts from the HUCAN project, who are developing a novel and holistic approach for the certification and approval of AI-enabled ATM airborne and ground systems. See first-hand the future single controller working position, as well as a digital support for the controller.  (SJU Project ID: HUCAN)
16:45 – 17:00	<b>AI evolution in cockpit</b> <i>Pavel Kolcarek, Honeywell</i>  <b>Stand:</b> Honeywell – N40	AI-powered digital assistants have the potential to support both extended minimum crew and single-pilot operations, ensuring the same (or higher) levels of safety and same (or lower) workload as operations with a full crew today. Join partners in the DARWIN project, who will demonstrate aspects of monitoring pilot state and dynamic task distribution among the pilot and a set of digital assistants based on pilot state and task load.  (SJU Project ID: DARWIN)

## U-SPACE/AIRSPACE RECONFIGURATION

20 March, 10:00 – 11:30

As the use cases for drones and remotely-piloted aircraft systems gain ground, there is a growing need for airspace reconfiguration to accommodate these new entrants safely and efficiently. This tour will take a look at some the technological advancements and necessary changes to operational procedures to ensure a harmonious coexistence between manned and unmanned aircraft.

Tour guide: Robin Garrity, SESAR JU

Time	Topic	Description
10:00 – 10:10	<b>INTRODUCTION</b> <i>Robin Garrity, SESAR JU</i>  Stand: Europe for Aviation - H22	Check-in and introduction
10:10 – 10:25	<b>Unlocking the potential of RPAS</b> <i>Mario Boyero-Perez, EUROCONTROL</i>  Stand: EUROCONTROL – H22	Managing remotely-piloted aircraft System (RPAS) traffic is challenging for controllers since RPAS fly significantly slower than conventional jet airliners and experience latency in communicating or loss of communications link with the ground. Find out more about RPAS and their specific use cases and requirements from EUROCONTROL, partners in the IRINA project. The visit will also put the spotlight on gaps in current standards and regulations, and coordination between civil and military stakeholders.  (SJU Project ID: IRINA)
10:25 – 10:40	<b>Marking a new “aura” in air mobility</b> <i>Roman Stickler, Frequentis</i>  Stand: Frequentis – H25	One of the main hurdles facing urban air mobility is the safe integration of unmanned vehicles into low-level airspace without impacting conventional air traffic operations. Find out more about the results of the recently completed AURA project, and get a closer look at project partner, Frequentis’ management systems for air traffic manager and drone operators, which are integrated into its common information system.  (SJU Project ID: AURA)
10:40 – 11:00	<b>360-degree on ATM and U-space interoperability</b> <i>Marta García Gutiérrez, Indra</i>  Stand : Indra – E14	Take a 360-degree look at work of the AURA project, which demonstrated a set of services and identified the information exchange requirements for enabling ATM and U-space systems interoperability. Lead partner, Indra, will also give insights into the ENSURE project, which is building on the outcomes of AURA to refine and complete the definition of a common interface and services for U-space and ATM. The project will develop a standardized data model, architecture and an operational methodology.  (SJU Project ID : AURA & ENSURE)
11:00 – 11:15	<b>Dynamic airspace reconfiguration at your service! (I)</b> <i>Pablo Sánchez-Escalonilla, ENAIRE</i>  Stand : ENAIRE – M34	ENSURE project partner, ENAIRE, will offer a further perspective on the dynamic airspace reconfiguration service. The visit will be a chance to hear about the project’s simulation capabilities, including a high-fidelity flight simulator in an airport environment to test non-nominal cases.  (SJU Project ID : ENSURE)
11:15 – 11:30	<b>Dynamic airspace reconfiguration at your service! (II)</b> <i>Gianluca Marrazzo, Leonardo</i>  Stand: Leonardo- I47	Get further insights into the ENSURE project and the foreseen implementation of a dynamic airspace reconfiguration service. Visitors will have a chance to see mixed manned and unmanned traffic, with interactions between the Leonardo LeadInSky platform and the d-Flight system.  (SJU Project ID : ENSURE)



## VIRTUALISATION AND CYBER-SECURE DATA SHARING

**20 March, 11:30 – 12:45**

In the future, service provision will be decoupled from the physical infrastructure, enabling air traffic and data service providers, irrespective of national borders, to plug in their operations where needed in a secure manner. In doing so, air traffic service units will be able improve capacity in portions of airspace where traffic demand exceeds the available capacity and offer contingency options. This tour will present progress on the virtual centre concept and delegation of service provision with demonstrations of some of the enabling technologies and underlying architectures.

**Tour guide: Adriano Acanfora, SESAR JU**

Time	Topic	Description
11:30 – 11:45	<b>INTRODUCTION</b> <i>Adriano Acanfora, SESAR JU</i> <b>Stand: Europe for Aviation - H22</b>	Check-in and introduction
11:45 – 12:00	<b>Inside the virtual centre triangle</b> <i>Julián Chaves Cáceres, Indra</i>  <b>Stand: Indra – E14</b>	Go behind the scenes and find out about the virtual centre “triangle architecture”, which disaggregates services currently offered by one main ATM data service provider (ADSP) into new specific functionality-oriented ADSPs for arrival management, time-based separation and conflict detection and resolution. Building on the results of the SESAR 2020 PJ.32 project, VITACY project lead, Indra, will present work underway to develop cyber-resilience tools to monitor attacks and display alerts if detected.  (SJU Project ID: VITACY)
12:00 – 12:15	<b>Delegation of ATM services provision among ATSU’s &amp; virtual centre</b> <i>Maarten van der Lee, Frequentis</i>  <b>Stand: Frequentis – H25</b>	Dive deeper into the topic of virtual centres with a look at how remote services are transforming the way air traffic services are delivered. This showcase will demonstrate voice ADSP, including the switch between two different virtual ADSPs.  (SJU Project ID: PROSA)
12:15 – 12:30	<b>Making controller rostering more flexible</b> <i>Michael Finke, DLR</i>  <b>Stand: DLR – D34</b>	Air traffic controllers are a key resource in air traffic management. Deploying controllers more flexibly to specific portions of en-route airspace, sectors and working positions, when and where needed, can help ATM become more resilient and responsive to unexpected events, changes in traffic demand or staff shortages. Find out about the IFAV3 project, which aims to advance the concept behind increased flexibility of controller validations (IFAV) based on technical enablers, such as specific controller assistance systems that provide support on sector specific procedures and rules.  (SJU Project ID: IFAV3)
12:30 – 12:45	<b>iSNAP (iTEC SkyNex ATC Platform)</b> <i>Mayte Cano Rincón, Indra</i>  <b>Stand: Indra – E14</b>	Dig into the technical detail and find out about how the move towards virtual centres is transforming ATM platforms. Hear from Indra, lead partner in the iSNAP project, about the start-of-the-art technologies that are being integrated into the iTEC (interoperability Through European Collaboration) system. The new functionalities developed to support the virtual centre concept will provide control centres with greater flexibility and scalability, improving safety and on-time service delivery, and optimising costs.  (SJU Project ID: iSNAP)

## U-SPACE

20 March, 14:00 – 15:45

A sector quick to embrace digital technology is the unmanned aviation market where new entrants already offer emergency and medical services as well as inspection, survey and parcel deliveries. Since 2016, SESAR JU has carried out extensive validation and flight trials in urban and non-urban environments helped to shape U-space services and concept definition by delivering deployable solutions to help scale up this sector. So what is next for U-space and innovative air mobility (IAM)? Join this tour to find out!

Tour guide: Triona Keaveney, SESAR JU

Time	Topic	Description
14:00 – 14:15	<b>INTRODUCTION</b> <i>Triona Keaveney, SESAR JU</i> <b>Stand:</b> Europe for Aviation - H22	Check-in and introduction
14:15 – 14:30	<b>Curtains up for innovative air mobility</b> <i>Jolana Dvorska and Jiri Ilcik, Honeywell</i>  <b>Stand:</b> Honeywell – N40	Innovative air mobility (IAM) has the potential to revolutionise transportation. Join OperA project partner, Honeywell, to find out how the project is helping to accelerate market uptake. The project will validate complex IAM operations (piloted air taxi and unmanned cargo) in real-life air traffic control conditions, including contingency and non-nominal situations. It will specifically address air/ground integration and the critical transition from piloted towards automated flights, making use of several key autonomy-enabling technologies.  (SJU Project ID: OperA)
14:30 – 14:45	<b>Managing safe separation</b> <i>Pablo Sanchez Escalonilla, ENAIRE</i>  <b>Stand:</b> ENAIRE – M34	Keeping aircraft safely separated is one of, if not the core function of air traffic management today. As larger numbers of unmanned aerial systems (UAS) take to the skies, separation management becomes more important to avoid mid-air collisions. SPATIO project partner, ENAIRE, will provide an overview of key strategic and tactical conflict resolution services and the relationship between separation and capacity in U-space airspace.  (SJU Project ID: SPATIO)
14:45 – 15:00	<b>Pioneering vertiports</b> <i>Iliyana Simeonova, EUROCONTROL</i>  <b>Stand:</b> Europe for Aviation - H22	Vertiports need to be conceptualised into the urban landscape and into the airspace in a safe and sustainable manner. EUREKA is integrating vertiports into the cities of tomorrow by extending the existing U-space regulatory framework with 4 dedicated solutions: performance-based requirements for approach, departure and en-route procedures to and from vertiports, managing disturbances and emergencies within vertiport environment, a Vertiport Collaborative Traffic Management System, and a Vertiport Network Manager.  (SJU Project ID: EUREKA)
15:00 – 15:15	<b>Welcoming a new era of urban air mobility</b> <i>Patricia Hervías, EUROCONTROL, Giovanni Riccardi, ENAV and Daniel Garcia -Monteavaro, ENAIRE</i> <b>Stand:</b> ENAV - H33	Get a progress report on the work of the U-ELCOM, a 3-year Digital Sky Demonstrator which aims to ensure routine commercial drone operations in Europe by 2026. Bringing together an impressive number of partners from across Europe, the demonstrator has completed the fine-tuning of U1 and U2 services and solutions, and conducted over 100 flight tests, collecting valuable data for the wide-scale deployment of U-space.  (SJU Project ID: U-ELCOM)
15:15 – 15:30	<b>Creating an unmanned flight ecosystem</b> <i>Javier Camacho Font, Collins</i> <b>Stand:</b> Collins – C26	Join us to find out about the unmanned flight ecosystem that has been set up in Ireland by partners in the EALU-AER Digital Sky Demonstrator. Get a closer look at the surveillance and communications systems that project partner, Collins Aerospace, is leveraging to enable beyond visual line of sight (BVLOS) operations seamlessly integrated with ATM.  (SJU Project ID: EALU-AER)
15:30 – 15:45	<b>Gearing up for U-space implementation</b> <i>Luc ANTOON &amp; Simon DEVOLDERE, skeyes, Hendrik-Jan VAN DER GUCHT, SkeyDrone</i> <b>Stand:</b> skeyes – O11	What's the outlook for U-space implementation in Belgium? Get the latest from skeyes, coordinator in the BURDI Digital Sky Demonstrator, which is testing a set of services implementing a single common information services provider (SCISP) in the Port of Antwerp-Bruges. Find out about how the USSP will handle demands for flight authorisations, traffic information, weather information, and other services in real life environment tests within uncontrolled airspace context.  (SJU Project ID: BURDI)

## REMOTE TOWERS

20 March, 14:30 – 16:00

Significant advances have been made in remote tower technology since the concept first became an implemented reality in 2014. What started as a concept to make small and regional airports more viable has extended into new and sometimes unexpected directions, transitioning into a family of solutions and blending other technologies such as virtual or augmented reality. This tour will look back at some of the solutions delivered so far and where next for this ground-breaking technology.

Tour guide: Peter Hotham, SESAR JU

Time	Topic	Description
14:30 – 14:45	<b>INTRODUCTION</b> <i>Peter Hotham, SESAR JU</i> <b>Stand:</b> Europe for Aviation - H22	Check-in and introduction
14:45 – 15:10	<b>May virtual tower operations become real?!</b> <i>Jörn Jakobi, DLR, Julia Schön, DLR</i>  <b>Stand:</b> DLR – D34	Imagine a future where the complete controller working position (CWP) including out-the-window view and all other needed CNS systems are contained within a virtual environment. Not in cave, nor in a remote tower centre but in the realms of a pair of wireless state-of-the-art virtual reality glasses. With these glasses and internet access, you can manage the night traffic in Melbourne from Geneva. You can control the only night flight from the comfort of your home. You can call for controller assistance during an emergency. Hardware maintenance is thing of the past. Fact or fiction? Check out our prototype and share with us your thoughts!  (SJU Project ID: PJ05-W2 spin-off)
15:10 – 15:25	<b>Remote digital towers – a success story</b> <i>Eric Wernsperger, Frequentis</i>  <b>Stand:</b> Frequentis, H25	Remote digital tower technology has completely changed the way towers are operated now and will be in the future. Join project partner, Frequentis, for a deep dive into the research and innovation and what this technology means for safety, efficiency and productivity in ATM.  (SJU Project ID: PJ.05-W2)
15:25 – 15:40	<b>TRUSTworthy AI for remote digital towers</b> <i>Christophe Hurter, ENAC</i>  <b>Stand:</b> DSNA – O29	AI technology in digital remote control towers must be trustworthy. That is the guiding mantra of TRUSTY, which aims to develop transparency and explanations to enhance the reliability of the decisions made by AI in the context of remote digital towers. TRUSTY's main tasks include monitoring taxiways and runways, and providing explanations for warnings. Join project partner, ENAC, to find out more about the project.  (SJU Project ID: TRUSTY)
15:40 – 16:00	<b>ENAV RT solution from R&amp;D to Deployment</b> <i>Francesco Nacchia, Rino Bellapadrona and Lorenzo Tavernese ENAV</i>  <b>Stand:</b> ENAV – H33	In 2022, ENAV made operational its first remote tower with many others to follow in the coming years. The presentation aims at retracing the Italian success story on remote towers from research to operational deployment. Visitors will be given an overview of ENAV remote tower services developments both from SESAR research and deployment perspectives, and will have the opportunity to experience the operational platform deployed in Brindisi airport through a demo.  (SJU Project ID: Racoon, Pj05-W1 and Pj05-W2 and ENAV operational deployment)

## NEW OPPORTUNITIES FOR A DIGITAL EUROPEAN SKY

20 March, 15:45 – 16:45

Europe's skies are complex and regularly congested. SESAR partners are looking at a portfolio of intelligent solutions that can bring capacity to the airspace in the right place and the right time. This tour will put a spotlight on how SESAR solutions are innovating airspace utilisation, allowing conventional aircraft to share the airspace with many other types of air vehicles. The scope covers a breathtaking spectrum of airspace users from drones and air taxis in U-space and over cities, through airliners in conventional airspace, up to the higher airspace, where supersonic aircraft will fly amongst balloons in the stratosphere, while commercial space operations enter and return from the edges of outer space.

Tour guide : Olivia Nunez, SESAR JU

Time	Topic	Description
15:45 – 16:00	<b>INTRODUCTION</b> <i>Olivia Nunez, SESAR 3 JU</i> <b>Stand:</b> Europe for Aviation - H22	Check-in and introduction
16:00 – 16:15	<b>SAFIR-Ready - Enabling Mission Ready drone services</b> <i>Mikael Shamim, Helicus</i>  <b>Stand:</b> Europe for Aviation - H22	The SAFIR-Ready initiative aims to transform emergency medical and critical infrastructure responses through the utilisation of advanced aerial mobility and U-space technologies. SAFIR-Ready's primary objective is to pioneer the development of comprehensive U-space services, systems, and procedures. These advancements ensure both the safety and efficiency of airspace access. The project's approach involves leveraging automated capabilities for airspace management in urban environments and establishing high-level automated and digitised communication systems. This holistic model aims to achieve "mission readiness," facilitating urgent air mobility services for medical emergencies and critical infrastructure situations.  (SJU Project ID: SAFIR-READY)
16:15 – 16:30	<b>U-space examples in the Port of Antwerp</b> <i>Jürgen Verstaen, Unifly</i>  <b>Stand:</b> Unifly - E10	In many discussions surrounding U-space, the common perception is that it primarily pertains to aviation. However, an increasing number of entities are exploring U-space and drone operations to enhance their daily tasks. Notably, cities and port authorities are emerging as new users of the airspace. Despite their interest, these stakeholders currently lack the knowledge required to safely integrate such operations into existing airspace volumes and adhere to regulations.  Since 2012/2015, there has been a notable shift in the landscape, with various sectors becoming early adopters of U-space technology. The significance of integrating new stakeholders cannot be overstated, as it plays a crucial role in ensuring safety and situational awareness within the sector. Recognising this evolving landscape is essential for fostering a secure and efficient environment for drone operations across diverse industries.  (SJU Project IDs: BURDI, CERTIFLIGHT, ENSURE, EUREKA and SPATIO)
16:15 – 16:30	<b>Making space for higher airspace operations</b> <i>Sven Kaltenhaeuser, DLR</i>  <b>Stand:</b> DLR – D34	If higher airspace is to be used safely and efficiently by aircraft in the future, then a clear understanding of the expected demand – and the procedures that need to be put in place – needs to be articulated. Find out more about higher airspace operations and the work of the ECHO 2 project on a new service to enable the Network Manager, air traffic control, and other stakeholders to monitor space activities in real-time. Participants will learn about the features of the new service and the next steps for the project.  (SJU Project ID: ECHO-2)
16:30 – 16:45	<b>ENAV Free Route Cross Border implementation</b> <i>Paolo Nasetti, ENAV</i>  <b>Stand:</b> ENAV – H33	This Implementation Project allows ENAV to extend its cross-border free route operations towards East and South East Enhanced Free Route Airspace (SECSI FRA), with a further future extension towards Malta airspace. The Area Control Centres (ACCs) involved are Padova, Brindisi and Roma. In addition, FRA vertical limit is lowered from FL305 to FL195 to ensure TMA connectivity and cross-border FRA harmonisation among neighboring States.  (SDM Project ID:2022_007_AF3 South East Enhanced FRA implementation)

