



AUDIO

AIRSPACE USER SUPPORTING
DEMONSTRATIONS OF INTEGRATED
AIRPORT OPERATIONS

PRESS RELEASE

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New SESAR project aims to make aircraft movement on the airport surface safer and more efficient

On time, resilient and seamless traffic in European airspace requires a modernized air transport system. In connection with the SESAR 2020 research project *Integrated Airport Operations*, the Airspace User Demonstration *AUDIO* (Airspace User supporting Demonstration of Integrated Airport Operations) has been launched. The demonstration project, funded by the European Union, aims to improve safety, efficiency and predictability of flights by increasing the flight crew's situational awareness while the aircraft is taxiing.

In the next 20 years, the frequency of air travel for the average citizen will increase by one to two percent per year in developed countries, according to a recent IATA forecast. This means new challenges for airports and pilots, who will have to manage increased congestion whilst maintaining safety.

To ensure timely arrivals and smooth baggage claims, but also to improve environmental performance by reducing fuel consumption, Europe's Air Traffic Management (ATM) system needs constant updates. Steffen Loth, coordinator of the newly launched AUDIO (Airspace User supporting Demonstration of Integrated Airport Operations) project at the German Aerospace Center (DLR), explains: "Promising new solutions for airport operators and air navigation service providers are almost ready for deployment at European airports. Pre-operational trials have shown safety and efficiency benefits of these new solutions. For an integrated approach to a modernized air transport, we need to go beyond these ground-based solutions, involve airlines as central partners and share available information between all stakeholders."

Providing additional information to the cockpit

Cockpit crews currently have access to information such as the digital layout of airports or a graphical representation of their own position through what is called the Electronic Flight Bag (EFB) System. AUDIO proposes to provide additional data, traditionally available to controllers only.

In a real-life demonstration at Hamburg airport, AUDIO will demonstrate the viability of an innovative advanced and connected moving map application, developed under a previous EU funded project. The application provides the cockpit with local airport data such as the on-ground traffic situation and planned taxi routes.



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Safer planning, more fluidity, less stress

Equipped with this additional information, on-board operations are expected to run smoother as crews are aware of the planned ground trajectory and the surrounding complex environment. This also allows them to react more easily to last-minute re-planning of routes once the aircraft is off-block. The results: a safer sequence, a more reliable targeted take-off time, less complexity for the crew, more efficient taxiing and fewer emissions due to lower fuel consumption.

AUDIO will also make sure that this innovative application is easily accepted by pilots, airlines, manufacturers and other stakeholders in the ATM community and prepare its market uptake.

Four experienced European partners join forces in AUDIO

AUDIO is coordinated by DLR, which provides ground information, flight plan and route information collected by the Airport Research and Innovation platform (ARIF) in Hamburg, Germany. Deutsche Lufthansa will adapt the existing EFB solutions, oversee the demonstration at Hamburg Airport and evaluate them under real-life conditions. Norway-based SINTEF provides the SESAR solutions to be used for the demonstration. French management consultancy ARTTIC will ensure the dissemination of the project's results and achievements.

AUDIO is funded under the SESAR 2020 programme through a specific call within the European Union's Horizon 2020 framework programme for Research & Innovation, specifically aiming to modernize the air traffic management system. A total of 1.06 million Euros has been awarded to the consortium to run the project over two years.

About SESAR 2020 Research and Innovation Programme

SESAR 2020 is an innovative programme for researching the future of air traffic management in Europe. It builds on its predecessor, SESAR 1, to deliver high-performing operational and technological solutions for uptake by the aviation industry. With a budget of 1.6 billion between now and 2024, SESAR 2020 will support projects to deliver solutions in four key areas, namely: airport operations, network operations, air traffic services, technology enablers.

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. 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.

Deutsches Zentrum für Luft- und Raumfahrt (DLR)

The German Aerospace Center (DLR) is the national aeronautics and space research centre of the Federal Republic of Germany. Its extensive research and development work in aeronautics, space, energy, transport, security and digitalisation is integrated into national and international cooperative ventures. In addition to its own research, as Germany's space agency, DLR has been given responsibility by the federal government for the planning and implementation of the German space programme. DLR is also the umbrella organisation for one of the nation's largest project management agencies.

DLR has approximately 8,000 employees at 20 locations in Germany: Cologne (headquarters), Augsburg, Berlin, Bonn, Braunschweig, Bremen, Bremerhaven, Dresden, Goettingen, Hamburg, Jena, Juelich, Lampoldshausen, Neustrelitz, Oberpfaffenhofen, Oldenburg, Stade, Stuttgart, Trauen, and Weilheim. DLR also has offices in Brussels, Paris, Tokyo and Washington D.C. www.DLR.de

Deutsche Lufthansa Aktiengesellschaft

Deutsche Lufthansa Aktiengesellschaft (Deutsche Lufthansa AG) is one of the world's leading aviation groups. Its portfolio of companies consists of hub airlines, point-to-point airlines and aviation service companies. Its combination of business segments makes the Lufthansa Group a globally unique aviation group. Lufthansa Group is a global aviation group with a total of 540 subsidiaries and equity investments, which in the financial year 2015 were organised into the Passenger Airline Group, Logistics, MRO, Catering and Other business segments. All the segments occupy a leading position in their respective markets. In 2015, the Lufthansa Group generated revenue of EUR 32.1bn and employed an average of 119,559 staff. www.lufthansagroup.com

SINTEF AS

SINTEF is the largest independent research organization in Scandinavia. It is participating in the SESAR 2020 programme through the consortium NATMIG, which it also coordinates. Having gained competence in state-of-the-art ATM research for several decades, the increased focus through the SESAR 1 and SESAR 2020 involvement has substantially improved SINTEF's technology and aligned it further to the needs of the aviation industry and airspace users. The activity in SESAR has also increased SINTEF's aeronautical research portfolio outside SESAR. SINTEF is a multidisciplinary research foundation, bringing know-how and ideas to ATM domain through its state-of-the-art research in other domains like Oil & Gas, Space, Health & Medicine, Constructions, Energy, Marine, Railway, Roads, and Resilience. www.SINTEF.no

ARTTIC

ARTTIC assists clients from all business and research sectors, small and large, private and public, to ensure the success of their collaborative research & innovation ventures. During close to 32 years of success, ARTTIC developed and demonstrated expertise in the set-up and management of to date 400 large-scale ambitious projects of which 96 were successful under H2020 calls. Based on its long-standing experience in a range of funding programmes across scientific and technological domains, ARTTIC helps clients to move from strategic plans to effective competitive research and development of innovative solutions, resulting in successful applications and businesses. ARTTIC is a company of the PNO Consultants group, the European leader for consultancy in innovation and funding. www.arttic.eu



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Partner logos



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