

AIR NAVIGATION SERVICES NEWS

Spain's ANSP Enaire together with Indra have created a public-private initiative project for satellite technology innovation. Called Startical, the project's objective is to create and deploy a network of more than 200 small satellites at a low altitude to improve air traffic management with a global service vision over the entire planet. Along with its aircraft position monitoring services (ADS-B), Startical will be the first satellite platform for air navigation to include a VHF radio communication system between the controller and the pilot in accordance with aeronautical standards; this is a differentiating factor compared with similar initiatives. It is, therefore, a pioneering project worldwide, offering integrated surveillance and communication. These new services will increase flight safety, capacity, efficiency, and punctuality, with clear benefits for both airlines and passengers. In addition, this new technology will be applicable to other modes of transportation. The new surveillance and voice & data communication services in low coverage areas will also promote the creation of new routes, thereby reducing costs and emissions. In addition, this improved reliability of information and optimization of air navigation services will help free up airspace in congested areas, facilitate the work of air traffic controllers and resulting in more efficient, punctual, and even safer flights.

The Enaire and Indra project will be carried out in two phases. The first, from 2021 to 2023, will address the technical developments necessary to ensure the viability of the solution and deal with the regulatory and market aspects. Once this first phase is successfully completed, a second phase, to be carried out between 2024 and 2027, will implement the provision of these services on a global scale, with the deployment of the complete constellation. The investment envisaged for the first phase is EUR 29.2 million over the three-year period, with a contribution from each partner of up to EUR 9.95 million euros, may change depending on whether European Next Generation and Horizon/SESAR funds are obtained. Startical will use small satellites, which are easier to manufacture and maintain than conventional ones, leading to additional benefits. Based on the New Space concept, the renewal of the entire constellation every five years on average will allow for much faster technology improvement and upgrade cycles than those of a traditional constellation, which can take 15 years to be renewed. #1145.ATC1

To cater for Hong Kong's long-term air traffic demand, Hong Kong International Airport (HKG) is developing into a three runway System (3RS) that includes the construction of a third runway, modification of the existing North Runway, and the construction of airport support infrastructure, utilities, and facilities. To support the 3RS implementation, new air navigation service (ANS) equipment and the replacement/upgrade of existing ones are required. In light of the complexity and scale of this project the Civil Aviation Department (CAD) of the Hong Kong Special Administrative Region Government has engaged the Egis/ADP Ingénierie consortium to provide professional services for ANS equipment implementation.

The technical consultancy and engineering services provided to the CAD by Egis and its partners will include consultancy on procurement, design, safety assessment, cutover, and transition of new and upgraded/replaced ANS equipment; as well as on-site technical support/assistance during installation, integration, testing, commissioning cutover, transition, and decommissioning, as necessary. Egis Asia-Pacific Aviation director, Antoine Bonnaud, said: "Leading a consortium with ADP Ingénierie, we have assembled a tailored team of more than 20 engineers and experts who will set up a local system engineering office and deliver in-house support to the CAD." #1145.ATC2

In Belarus, an air traffic control centre (ATCC) of the state enterprise Belaeronavigatsia opened in Minsk's residential district Sokol on 15 May 2021. The opening of the air traffic control

centre is a significant event not only for the air transport industry but the country as a whole. A lot of accompanying tasks had to be accomplished in addition to building the facility and installing complicated equipment. First of all, it was necessary to establish tight cooperation with all the agencies involved in flight operations, including ties with the neighbouring countries. It was necessary to upgrade the hardware of the automated air traffic control system and train professionals to man the centre. The ATCC was built to improve air traffic service procedures, enhance the throughput capacity of Belarus' air space, and improve the quality of air traffic control services and the level of safety of flights. The air traffic control centre will also bolster the country's transit potential.

Belaeronavigatsia Director General, Leonid Churo, said: "It is a milestone event for our enterprise. The first stone was placed into the foundation of the air traffic control centre exactly five years ago. The centre is fitted with cutting-edge equipment. It will allow Belaeronavigatsia to triple throughput capacity." The investment project to build the air traffic control centre was implemented in line with the government programme on developing Belarus' transport complex in 2016-2020. Belaeronavigatsia financed the project out of its own resources.

The seven-storey building occupies a total area of about 10,000 sqm and the perimeter is surrounded by a double fence, intrusion sensors, and a smart video surveillance system with nearly 100 cameras. An area control centre on the fifth floor of the building is the heart of the complex. New cutting-edge equipment has been bought for it. The integrated airfield and area control system has been upgraded in light of the heightened requirements of the present time. The room is fitted with modern air conditioning and fire extinguishing systems. The room is separated into ten sectors. Some of them are backups. Since the air traffic volume grows every year, the number of air traffic control officers may be increased in the future. #1145.ATC3

Kazaeronavigatsia, Kazakhstan's national ANSP, has successfully taken the next step in its ATM-grade network infrastructure programme with Frequentis. A successful site acceptance test was recently performed for the second stage of the programme, following the networks' positive start in 2019. ATM-grade network components out of the Frequentis vitalsphere™ portfolio, including voice communication solution VCX-IP, build the foundation for a resilient air traffic management (ATM) network. The Frequentis network solution enables the exchange of air/ground (A/G) and ground/ground (G/G) data over an IP network, while ensuring safety and security at all times. "We are successfully migrating towards IP technology by extending the modernisation programme of our safety-critical ATM communication network. Following the success of stage one of this network project we are pleased to announce that site acceptance of the second stage has been equally successful, meeting all of our expectations," said Azat Bekturov, CEO of Kazaeronavigatsia.

The second phase of the programme comprises 28 VCX-IP systems for 14 sites across Kazakhstan as well as updates to four existing sites. #1145.ATC4

Finavia has announced that it is investing EUR 7 million in the renovation of Helsinki Airport's (HEL) air traffic area in summer 2021. The goal is to ensure the smooth taxiing and apron operations of aircraft. "We are taking advantage of the lower traffic volumes caused by the pandemic and renovating areas that are easier to work on now compared to the normal traffic situation. The effect on traffic and the management of aircraft noise will be minor," said Jani Elasmaa, Vice President of Finavia. The renovation work will take the entire summer to complete. During the renovation, work will be carried out on the surfaces of the taxiways and the apron, the aircraft parking stands and the stormwater sewer system. The work will be done in the air traffic area, which means that there will be temporary changes to the use of runways, as well as the taxiing and parking of aircraft.

Renovation work began in early spring 2021 and will continue into the autumn. A major part of the renovation work will be carried out in two stages during the summer, from 31 May to 26 August 2021. The first stage, which will take place in June and July 2021, will have the biggest impact. During the first stage (31 May to 8 August 2021), only one runway will be available in the daytime. Runway 3 (22R/04L) will be used for take-off and landing from 06:00 to 00:00. During that time, Runway 1 (04R-22L) and Runway 2 (15-33) can only be used for taxiing. All runways will be open for take-off and landing from 00:00 to 06:00. The second stage will take place from 16 August to 26 August 2021. During this stage, Runway 3 (22R/04L) will be closed for 10 days. Runway 1 (04R-22L) and Runway 2 (15-33) will be used for take-off and landing. #1145.ATC5

Through its branch in Colombia, GECI ESPAÑOLA has been awarded the contract to provide the system, operation, and maintenance (O&M) of the hardware and software for the Management of Aeronautical Information (AIM). The contract, which began in January 2021, is part of the evolution of the AIM system and provides for the transition from the traditional Aeronautical Information Service to AIM by upgrading the systems currently in use, thanks to the innovative technologies of the IDS AirNav software manufacturer. The new AirNav IDS technology will provide a state-of-the-art digital platform capable of managing data to ensure the safety and punctuality of all flights. All static and dynamic data essential for air traffic control, such as NOTAMs, required to communicate useful navigational information to the aviation community, will be efficiently managed and published. #1145.ATC6

UAS/UAV Operation

Since the EU Commission Implementing Regulation (2019/947/EU) on the rules and procedures for the operation of unmanned aircraft systems (UAS) took effect on 31 December 2020, air operations with UAS have been governed by EU legislation. The EU legal framework leaves member states with a certain level of flexibility to regulate matters outside the scope of the EU Commission Implementing Regulation. Further, within the transitional period and until the complete implementation of the EU regulations in 2023, member states must adapt their domestic laws on UAS operations to the provisions of the EU regulations. Until such implementation is complete, both legal frameworks must coexist and not contradict each other. Among the matters reserved for member states, the EU Commission Implementing Regulation provides that each member state may have decision-making capacity in various areas, including: the establishment of requirements and exemptions for non-EU Aviation Safety Agency operations under the member state's control; the establishment of a minimum age for UAS pilots; the creation of national standard scenarios during the transitional period; the establishment of obligations regarding UAS insurance; the regulation of model aircraft and air shows and exhibitions; and the definition of UAS geographical zones for safety, security, privacy or environmental reasons.

Spain is developing domestic laws to adapt its regulations to the new EU regulations. A project of royal decree to adapt the legal framework on UAS operations in Spain is expected to be approved and take effect in 2021. This project will establish the measures and restrictions which will apply to operations within the competences of member states. In particular, the project of royal decree will seek to define the applicable requirements of such zones, highlighting the following: UAS geographical zones for military, security and national defence will cover prohibited or restricted areas to facilitate UAS operations near to military facilities or their security zones; UAS geographical zones for the protection of community infrastructure will establish certain operational requirements for UAS operations close to infrastructure facilities; UAS geographical zones for citizen security and urban area protection will cover cities and assemblies of people in highly populated areas; UAS geographical zones for the safety of

operations close to aerodromes will establish the safety distance and air volumes with which UAS operations must comply; and UAS geographical zones for operational safety in controlled air space and flight information zones will establish requirements for coordination between the UAS operator and the air traffic service providers with which UAS operators must comply.

Most of these UAS geographical zones will have the same requirement: the UAS operator must apply for the special permit of the manager or entity entitled to the control of the zone to allow the flight within the limits of such zone. As well as the existing requirements provided in the EU Commission Implementing Regulation, pursuant to the project of royal decree, UAS operators will have to be aware of their obligation to carry out the necessary communications and gather the required permissions from the manager of each UAS geographical zone when preparing operation flight plans.

Similarly, in overcrowded cities, UAS operators will likely have to obtain multiple authorisations prior to performing UAS operations, with the risk that any denials may compromise operations. #1145.ATC7

The US Transportation Security Administration (TSA) has selected Los Angeles International Airport (LAX), CA, to test drone detection technology for tracking drones that enter restricted airspace.

The selection of LAX to detect, track and identify (DTI) drones, also called unmanned aircraft systems (UAS), was said to be driven by multiple factors. These factors include LAX's diverse aviation operations, high passenger volume, a large number of enplanements and UAS activity frequency. TSA federal security director for LAX, Boyd Jeffries, said: "The selection of LAX as a strategic location to test UAS detection technologies underscores the close working and strategic relationship between TSA and Los Angeles World Airports (LAWA)." During the trials, the project will make use of security and surveillance technologies including radar, thermal imaging and artificial intelligence. The equipment will be tested, and the test data shared with interagency and industry stakeholders for further evaluation. TSA expects the test to help find solutions to mitigate the risks, which can be caused by unauthorised UAS operations.

To support the Department of Homeland Security's (DHS) role in UAS security, TSA will partner with the airport, local law enforcement and interagency partners including the DHS Science & Technology Directorate. Work on the LAX DTI testbed, which is being financed by the US Congress, will start later in 2021. #1145.ATC8

Polish technology company Aerobits, together with Latvian Mobile Telephone (LMT) have established cooperation aimed at increasing the level of safety in Latvian airspace for Unmanned Aircraft Systems (UAS).

The intended start of the project is summer 2021 with an anticipated duration of two to three months during which various test scenarios will take place. These will include demonstrations flights, LTE network coverage, and UTM integration. Aerobits will provide sector antennas, omni-directional ground stations, HOD devices, and ADS-B transceivers. #1145.ATC9

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