

INDRA WINS CONTRACTS WORTH 30 MILLION EUROS FOR THE EUROPEAN SESAR PROJECT THAT WILL INCREASE SAFETY AND CUT THE COSTS OF AIR NAVIGATION SERVICES

- **Indra is one of the most prominent enterprises involved in SESAR 2020, the second phase of one of the world's most ambitious air traffic R&D programs. The company is taking part in nearly every single project at the beginning of this phase and in two cases it is the project leader**
- **The technology developed for SESAR will transform air travel in Europe by facilitating a threefold increase in air traffic management capacity, improving safety by a factor of 10, reducing the environmental impact by 10%, and cutting the costs of navigation services by 50%**
- **Indra has incorporated the technological advances achieved in SESAR in the solutions it supplies to navigation service providers in 160 countries**

Madrid, January 23, 2017. Indra, one of the premier global consulting and technology companies, will play a prominent role in the second phase of the program to create the Single European Sky, called SESAR 2020. The company will take part in 25 of the 27 projects launched at the beginning of this second phase, and in two cases it will be the project leader.

The contracts awarded to Indra are worth a total of 30 million euros.

SESAR is one of the world's most ambitious initiatives in the field of air traffic research and development. The project is transforming air travel in Europe by greatly enhancing efficiency, safety, punctuality, and convenience for passengers.

The first phase of the program ended in 2016, while the second phase, known as SESAR 2020, will be implemented over the next five years. The work in this phase is broken down into two broad packages. The first one commences now and will be executed between 2017 and 2019, and the second one will run from 2019 to 2021.

The award of these new contracts strengthens Indra's position in this strategic project promoted by the European Commission in partnership with Eurocontrol and the main companies in the sector. Indra has played a leading role in SESAR since it was launched in 2006.

Greater punctuality of flights

Indra will lead two of the key projects that mark the beginning of SESAR 2020. The aim of the first one is to further the development of 4D trajectory-based flight management systems, a technology that allows aircraft to choose the most direct route and plan flights with an unprecedented accuracy and an error margin of only seconds regarding the landing time.

This project will enable Indra to continue the work it has already completed for SESAR. The company played a key role in the world's first flight trials ever performed with this technology, carried out in 2014 on a flight covering the Toulouse-Copenhagen route.

For SESAR 2020 Indra will provide new tools and more advanced capabilities to these 4D trajectory-based flight management systems, facilitating a single complete and real-time view of flight information for the entire aeronautical community.

This stage of the program will also include the first trials involving different countries, control centers and aircraft, aimed at testing the systems in an environment that reflects the real dimensions and complexity of the future Single European Sky.

With regard to the second project led by Indra, the company will focus on developing a series of common services for all the actors involved in managing flights in Europe, both civilian and military. These services will facilitate smoother and coordinated air traffic management while generating significant cost savings.

Specifically, the company will work to ensure that European navigation service providers can share a range of tools, including among others the system for redistributing and balancing capacity in situations of congestion, the trajectory prediction system that air traffic control centers across the whole of the continent will use, and the digital aeronautical charts service.

Seven real trials of the Single European Sky

With regard to the other projects, the company will focus on enhancing airport efficiency, implementing more advanced remote control towers, deploying state-of-the-art voice and satellite communication systems, enhancing the precision of air surveillance systems and aircraft guidance systems for surface and runway movements, and improving the compatibility between different technologies.

Indra will also take part in seven large-scale technological demonstrations involving several countries and designed to validate the technologies in a real environment. One of the most important demonstrations in this respect is the Collaborative Network Management project, aimed at improving air traffic and airport management in complex situations with a high volume of traffic.

These tests will be conducted in partnership with the navigation service providers and main airports of the United Kingdom, France and Spain, and with Eurocontrol. If successful, the solutions will be industrialized and implemented in control centers and airports across Europe.

SESAR objectives

The objectives of the SESAR program are to enable a threefold increase in traffic management capacity across Europe, improve safety by a factor of 10, reduce the environmental impact by 10%, and cut the costs of air traffic management services by 50%.

Only by modernizing systems and air operations will Europe be able to keep pace with the constant annual increases in air traffic. Flights are forecast to rise from 10 million per year at present to 16.9 million by 2030.

Specifically, Indra's developments for SESAR consist in the air traffic solutions and systems it supplies to the navigation service providers it works with in more than 160 countries. These providers enable millions of aircrafts to take off and land at airports across the globe every year, and to fly safely.

The development of latest-generation solutions positions Indra at the forefront of this global market as the technology partner for the most important navigation service providers in Europe.

About Indra

Indra is one of the main global consulting and technology companies and the technology partner for the key operations of its customers' businesses around the globe. It offers a comprehensive range of proprietary solutions and cutting-edge services with optimal technological capabilities, supported by a unique corporate culture of reliability, flexibility and adaptation to customer requirements. Indra is a world leader in the development of end-to-end technological solutions in fields such as Defense & Security, Transport & Traffic, Energy & Industry, Telecommunications & Media, Financial Services, and Public Administrations & Healthcare. Its Minsait unit addresses the challenges posed by digital transformation. In 2015 the company posted revenues of 2.85 billion euros, employed 37,000 professionals, had a local presence in 46 countries, and delivered projects in more than 140 countries.

About SESAR

The aim of SESAR, as the technological pillar of the Single European Sky initiative, is to modernize and harmonize air traffic management in Europe. SESAR Joint Undertaking (SESAR JU) was created in 2007 as a public-private partnership to support these efforts. To provide this support, the consortium uses the combined knowledge and resources of the entire ATM community to define, research, develop and validate innovative technology and operational solutions. SESAR JU is also responsible for executing the European ATM Master Plan, which defines the EU priorities in R&D and implementation. Founded by the European Union and Eurocontrol, SESAR JU comprises 19 members. Together with partners and affiliated associations, it represents more than 100 companies active both in Europe and further afield. SESAR JU also works closely with airport staff, associations, regulators and operators as well as the scientific community.