



Comprehensive Air Traffic Management system in Oman

Omani airspace modernization

The Ministry of Transport and Communications, launched the process to tighten air security and help optimize use of the country's airspace.

The Muscat control center, which governs Oman's airspace, needed a system that could adapt to the roles of in-flight and approach surveillance and present the information in an environment that would facilitate controller access and decision-making.

The requirements indicated that interoperability was a key concept in the design of the air traffic management systems. These would need to exchange information with other systems and control centers in other countries intervening in the air control operations.

The systems would be deployed in the Muscat traffic control center, which manages the entire upper airspace

of Oman. The new system would oversee the upper airspace, supporting flights en route and providing approach control services at the Muscat and Salalah International Airports. It would also provide back-up for the systems of Oman's Muscat and Salalah International Airports, and for four other regional airports (Sohar, Ras Al Hadd, Duqum and Adam).



Solutions

Turnkey air traffic management system

Indra submitted a turnkey project to supply an advanced automated air traffic management system that provided controllers with a complete and unique view of aircraft movement in the airspace under their responsibility. The controller workstations were designed from a holistic viewpoint, taking into account both current and future needs.

The control station features a single 56" high-resolution screen that allows controllers to quickly bring up any application on-screen, while providing rapid and easy access to radar, weather and flight plan information, amongst others.

The user-friendliness and the system's possibilities simplify the controllers' tasks, thereby increasing the time available for correct decision-making and for managing growing volumes of air traffic.

The control position was designed in accordance with the open architecture paradigm, which ensures easy adaptation to technological changes and advances to be integrated in the coming decades. This streamlines operability and updates to new software versions or of information

from various sources, without needing to modify the system.

The deployed solution has an advanced automated air traffic management system shared by all of the country's airports and control centers. The land-air voice communications system was renewed, a complete weather system was implemented and the aeronautical messaging management system was expanded.

The latest generation solution features advanced flight plan management tools, flight trajectory calculation systems and conflict detection. This system can manage a greater number of flights.

Oman's two international airports, Muscat and Salalah, have also been equipped with runway movement guidance and monitoring systems installed by Indra.

Indra also participates directly in the commissioning of its systems at all levels, whether technical or operational and control levels, thereby providing a comprehensive solution as well as contributing toward efficient and effective use of system functions to ensure maximum performance.

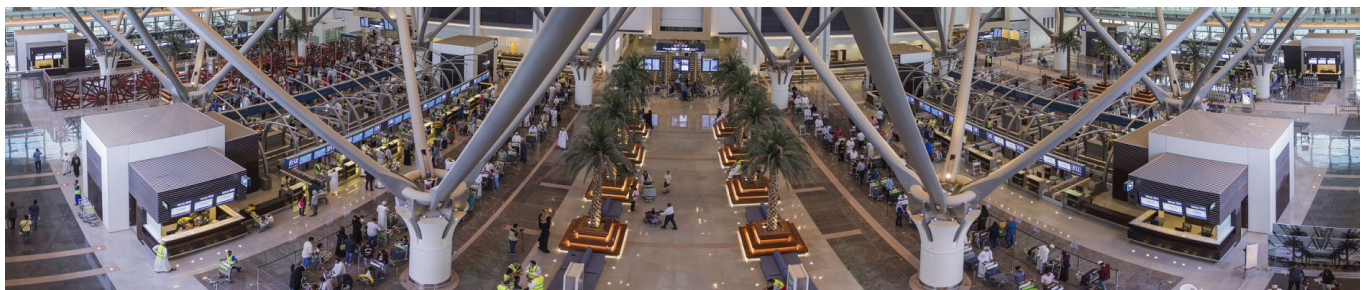


Benefits

Safety and ergonomics

All information is available and integrated in a single monitor for easy access and viewing.

- Virtual environment without visual distractions.
- Quick access to flight plans.
- Real-time access to information on weather conditions.
- Controller selection of on-screen information, as needed.
- Contingency center to respond to any type of incident and guarantee safety.
- Additional expansion of the aeronautical messaging management system connected to the international network.



Indra ATM

Air Traffic Management leader

Indra is a leading company in the supply of Air Traffic Management (ATM) systems. With over 100 years of experience, it has implemented more than 5,700 facilities across 180 countries.

Indra has positioned itself as market leader in the supply of air traffic management and communications, navigation and surveillance systems.

In the field of R&D, Indra is one of the leading companies in the SESAR program, the key technology behind the Single European Sky initiative. Indra is also the technological partner of many major European navigation service providers, including ENAIRE, NATS, DFS and EUROCONTROL, among others, and also the preferred ATM supplier for much ANSPs in Latin America, Africa and Asia.

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