

AOP (Airport Operations Plan)



Indra expertise in the ATM and airport business

Indra is the leading IT Spanish company and one of the top five ATM systems suppliers all over the world. Indra knowledge and its products portfolio reach all different areas at both air and land processes supporting all stages at the air traffic management business.

This knowledge, consolidated with the experience acquired along the last 30

years, has enabled Indra to create a new paradigm, called **In-Airport**, about how IT supports the airport information needs. **In-Airport** compiles all the know-how in both operational and technical environments accumulated with the references in ATM and airports, together with the leadership in the initiatives which are currently optimizing the airport processes (CDM) and defining the future for air transportation (SESAR).

AOP/CDM and its role within In-Airport

In-Airport paradigm includes new advanced ways for managing the aircraft process efficiently, as such process is crucial for the airport business core and profitability. The Airport Operations Plan (AOP) and Airport Collaborative Decision Making (A-CDM) supports such a new ways offering a common sharing awareness of the airport plan and the pre-departure sequence respectively.

The AOP guarantees a common airport operation plan between the local stakeholders providing knowledge of the current situation and detecting deviations on the plan contributing to the early decision making and corrections. In these sense, A-CDM ensure that the common situation awareness is reached between the stakeholders in order to obtain a pre-departure sequence that meet the airport operations plan needs.

Indra AOP/A-CDM solution integrate the most advanced concepts and guidelines conceived at international standardization forums, including the SESAR definition needs and functionalities for the AOP and A-CDM.

Key benefits of Indra AOP/CDM

- Extremely facilitates the airport performance framework around the common situation awareness, as well as an early detection on schedule deviations, which are not usually covered by other airport systems focused on the real-time operation.
- Complex airport operations require a common plan to measure the current airport situation.
- Prompt predictability of process deviations.

- Steering capability for the aircraft processes monitoring.
- Facilitate the collaborative decision making providing operational accurate information.
- for the demand and capacity balance required by the local stakeholders.
- Customized AOP instantiation based on the integration of systems availables.
- Application loosely coupled with the supporting technology, capable to be deployed in a variety of HW (Intel, IBM, Oracle...), Operating System (Linux, MS-

- Windows, Solaris, HP-UX...) and other base software (Oracle, MySQL or Postgress databases...)
- Supports proactive performance management
 - Improves predictability and reduces traffic bunching effect at arrivals
 - Reduces delays and fuel consumption, as well as optimizes resources usage, improves passenger quality service
 - Support Crisis management
 - Improves Safety and Capacity utilization

AOP modular components

Airport Operations Plan

Main functions

- Instantiation of the AOP keeping it updated with the right information at the right moment.
- Provides coordination with the Network

Manager during the strategic flight phase and during the tactical/execution phase (real time)

- Integrates communications features for Network interoperability
- Provides coordination with local ANSP for TMA/En-Route synchronization



Airport Operational Capacity

Main functions

- Map view of operations at the airport.
- Early automatic detection of abnormal capacity unbalance situations.

Airport-CDM

Main functions

- Milestone approach
- Aircraft process execution assessment.
- Trend analysis of the pre-departure sequence.
- Aircraft process status alerts.

References

Indra developed its A-CDM as the corporate A-CDM system for Aena, which is the world's largest airport operator with a network of 62 airports distributed around Spain and Latin America. The A-CDM was deployed in Barcelona el Prat and Palma de Mallorca airports.

Looking to the future, Indra participates on main international standardization and evolution forums about ATM and airport markets, leading all the works related to the systems evolution within airports at SESAR program. In fact, the AOP is currently deployed in Palma de Mallorca airport.

Related Services

Design and consulting services at both operational and technical contexts
 Product adaptation, product can be customized and adapted to fulfil any Specific airport requirements
 Integration with external systems
 Deployment
 Testing & Commissioning
 On-site, Off-site Support and Maintenance
 Product new versions updating service, with no additional cost if Indra is maintenance provider.



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