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# CERIS: Civil Engineering Research and Innovation for Sustainability

# Standard concepts for performance improvements in the airport operations areas – global interoperability

# Summary

Because of the exponential growth of air traffic and its importance of integration of countries, the implementation of improvements in the Global ATM system is becoming increasingly necessary. Within this scope, ICAO brings, within its Global Air Navigation Plan (GANP), an easily understood methodology called: "Aviation System Blocks Upgrade" (ASBU). It defines a language with a programmatic and flexible approach, aiming at performance improvements in the systems. And one of the sectors where one of these performance improvements is sought, as recommended in the ASBU, is the Airport Operations Area. In this area is the Airport Collaborative Decision Making (A-CDM) process.

This research aimed to review and improve the A-CDM method to enable its use in airports with lower disbursement capacity. It is based on regulations issued by the International Civil Aviation Organization (ICAO) and academic papers. Theoretically, it went deeper into the various global air navigation systems, such as the processes employed by the European Organization for the Safety of Air Navigation (EUROCONTROL) and the Federal Aviation Administration (FAA). Positions from entities such as the International Air Transport Association (IATA) and the Civil Air Navigation Services Organization (CANSO) were also researched. Subsequently, case studies of airports and interviews with international experts with knowledge on the subject were carried out. Finally, a survey was conducted with members of the Air Sector from around the world. Always focused on seeking compatibilities and opportunities for improvement in the process, mainly in economic gains.

According to the sequential strategy exposed above, a scenario analysis is done based on the results obtained at the end of the work. Then, a conclusion is presented, which aims to to apply the referred system, not only in countries with high capacity disbursement but mainly to deliver a solution that allows its application in countries and airports with medium to low financial resources. This solution presented is the goal sought in the research.

### **Keywords**

International Civil Aviation Organisation (ICAO), Global Air Navigation Plan (GANP), Aviation System Blocks Upgrade (ASBU), airport operations, Airport Colaborative Decision Making (ACDM).



A-CDM is about people working together, not technology!

The primary basis of A-CDM is information sharing.



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