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Regional survey on A-CDM

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4th ICAO SAM A-CDM Seminar

ICAO SAM Regional Office

Lima, Peru – Nov. 12-15, 2019



The Survey

- As part of the planning of this event, the Regional Office sent a State Letter SA5508 requesting States to complete a survey on A-CDM implementation.



International Civil Aviation Organization Organisation de l'aviation civile internationale Organización de Aviación Civil Internacional Международная организация гражданской авиации منظمة الطيران المدني الدولي 國際民用航空組織

Ref: LN3/24.1 – SA5508 Lima, 7 de agosto de 2019

Para: Dr. Tomás Insausti, Administrador Nacional, ANAC, Argentina
Gral. Fza. Ae. Celier Aparicio Anispe Rosas, Director Ejecutivo a.i., DGAC, Estado Plurinacional de Bolivia
Sr. José Ricardo Pataro Botelho, Director-Presidente, ANAC, Brasil
Ten. Brig. do Ar Jeferson Domingues de Freitas, Director General, DECEA y Presidente, CERNAL, Brasil
General de Aviación Vietor O. Villalobos, Director General, DGAC, Chile
Dr. Juan Carlos Salazar, Director General, UAEAC, Colombia
Cmde. Anyelo Patricio Acosta Arroyo, Director General de Aviación Civil, Ecuador
Cap. Gustavo Pérez Morales, Director General, AAC, República de Panamá
Abog. Edgar Alberto Melgarejo Ginard, Presidente, DINAC, Paraguay
Dr. Juan Carlos Pavic Moreno, Director General, DGAC, Perú
Brig. Gral. (Av.) Rodolfo Pereyra, Director Nacional, DINACIA, Uruguay
Almirante Carlos José Vieira Acevedo, Presidente, INAC, República Bolivariana de Venezuela

Asunto: RLA/06/901 – Cuarto Seminario/Taller sobre la Implementación de la Toma de Decisiones en Colaboración a nivel aeropuerto (A-CDM) y Capacidad Aeroportuaria (Lima, Perú, 12 al 15 de noviembre de 2019)

Acción requerida: Remitir encuesta sobre A-CDM Región SAM (SAM A-CDM) completa a más tardar el 13 de setiembre 2019.

Distinguído señor:

En complemento a nuestra carta SA5471 de fecha 26 de julio sobre el próximo Cuarto Seminario/Taller sobre la Implementación de la Toma de Decisiones en Colaboración a nivel aeropuerto (A-CDM) y Capacidad Aeroportuaria a llevarse a cabo en la Oficina Regional Sudamericana de la OACI, del 12 al 15 de noviembre 2019, tenemos a bien solicitarle a su Administración completar el formulario de encuesta adjunto y enviarlo al correo icaosam@icao.int a más tardar 13 de septiembre de 2019. Los resultados de esta encuesta servirán como insumo para el correcto desarrollo del evento.

De requerir mayor información con respecto a esta encuesta, no dude en contactar al Sr. Fabio Salvatierra (fsalvatierra@icao.int), Especialista Regional de Aeródromos y Ayudas Terrestres de la Oficina Regional Sudamericana de la OACI en Lima.

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Survey sections

- Approach to implementation
- Status of A-CDM Implementation
- A-CDM Project Scope
- Local Concept of Operations
- Stakeholder Engagement
- Project Implementation
- Training
- Challenges



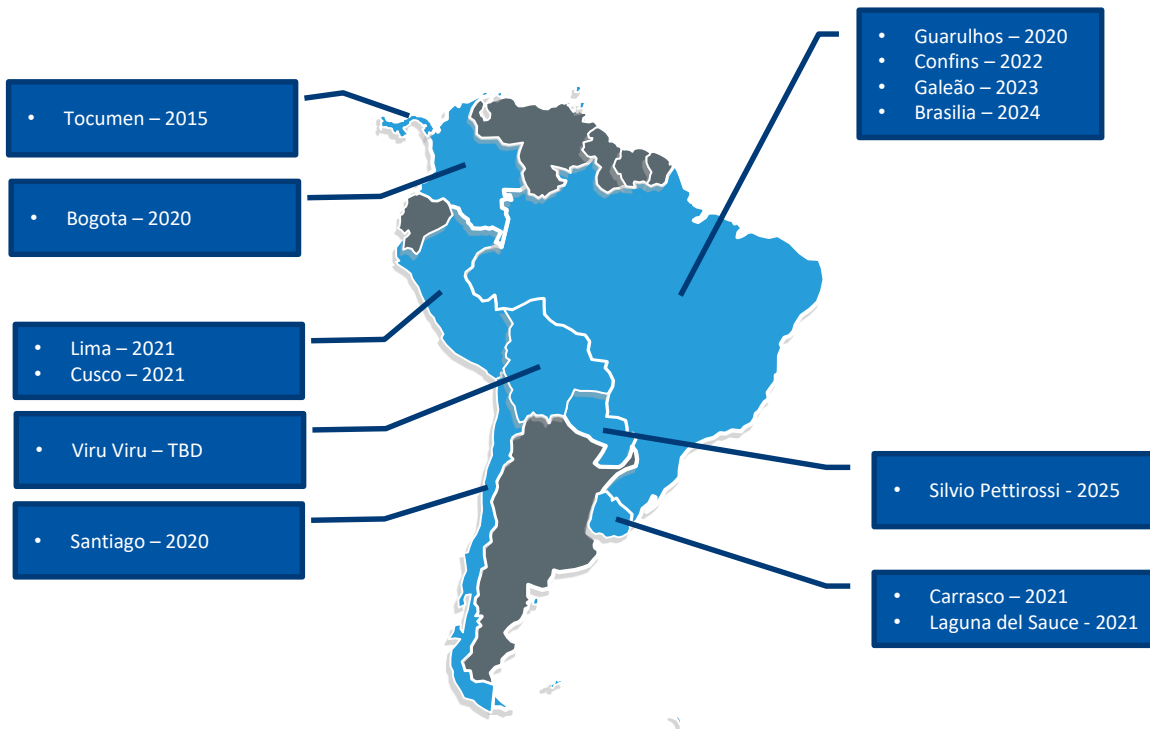


Survey details

- Survey sent to 14 SAM States
- 10 States replied to the survey (over 70%)
- Most States with high traffic replied to the survey
- Mix results suggest different levels of implementation and plans to implement



Planned or ongoing implementation





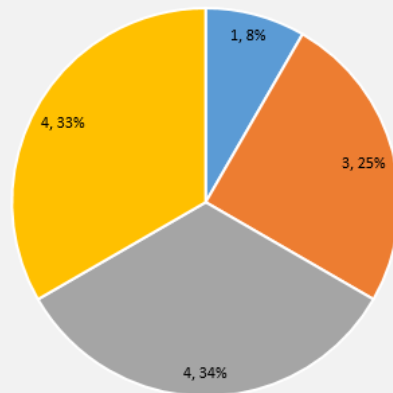
Is A-CDM a National or Local effort?

33% of States indicated that A-CDM it is a combination of a national program and separate airport projects manager at “local” level

Other 33% doesn't have a plan for A-CDM implementation

It's important to emphasize that traffic is not evenly distributed in all States

¿Es la implementación de A-CDM un programa/proyecto nacional o un proyecto local por aeropuerto?

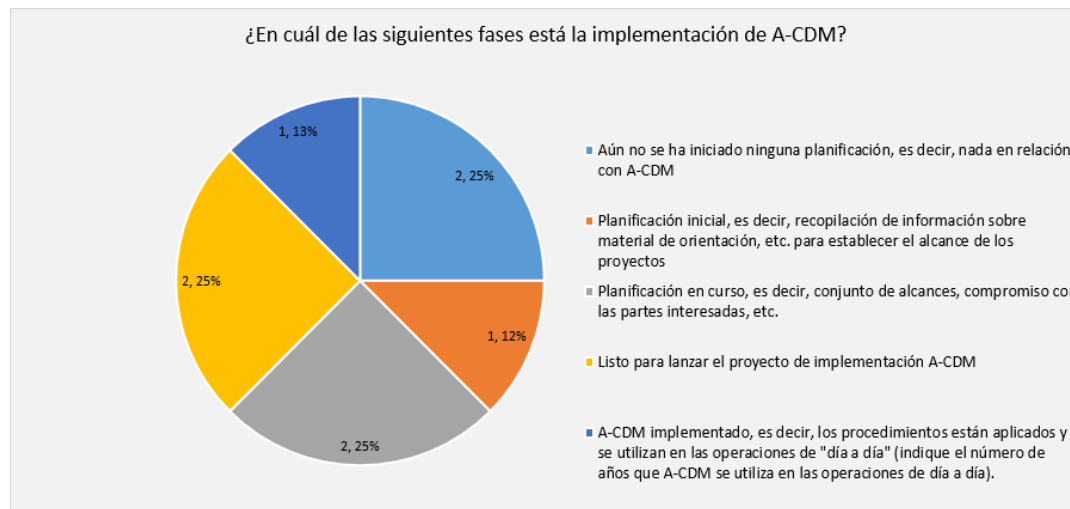


- Es un programa nacional donde A-CDM se está implementando en varios aeropuertos con una entidad que administra el programa general para facilitar procedimientos comunes y un enfoque de las implementaciones.
- Es un enfoque de "aeropuerto a aeropuerto" donde cada proyecto se gestiona a nivel "local"
- Es una combinación de un programa nacional y un gerente separado de proyectos aeroportuarios a nivel "local"
- Todavía no hay un plan de implementación para A-CDM,



A-CDM Implementation Status. Phases

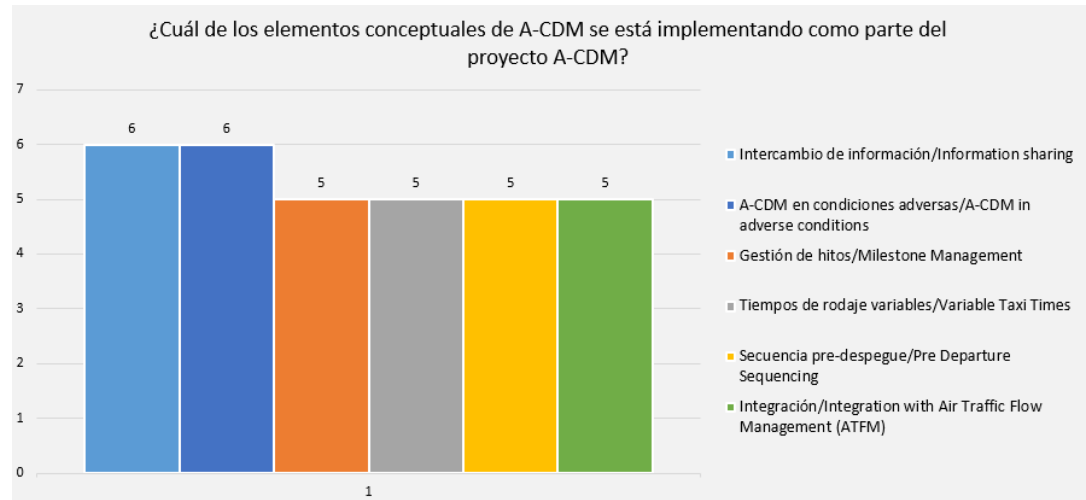
- 8 States replied
- 1 State replied that A-CDM is ready and used in a day-to-day basis
- 25% of States are ready to launch their A-CDM Implementation Projects
- Results show mixed levels of maturity related to implementation





Scope A-CDM conceptual elements implementation

- Most States prioritize information sharing as a basic element to incorporate on the A-CDM implementation.
- It was expected that all implementations considered Milestone Management, Variable taxi times and Pre departure sequencing as basic to implement.

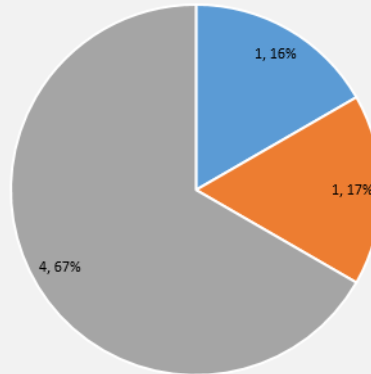




How is information sharing implemented?

- Most States agreed that a combination of manual interaction and the use of technology (via a information sharing platform) is the way to implement information sharing on an A-CDM environment.
- On smaller and less congested airports, maybe manual interactions may suffice.

¿Cómo se implementa el intercambio de información a la par de la solución / solución A-CDM planificada?

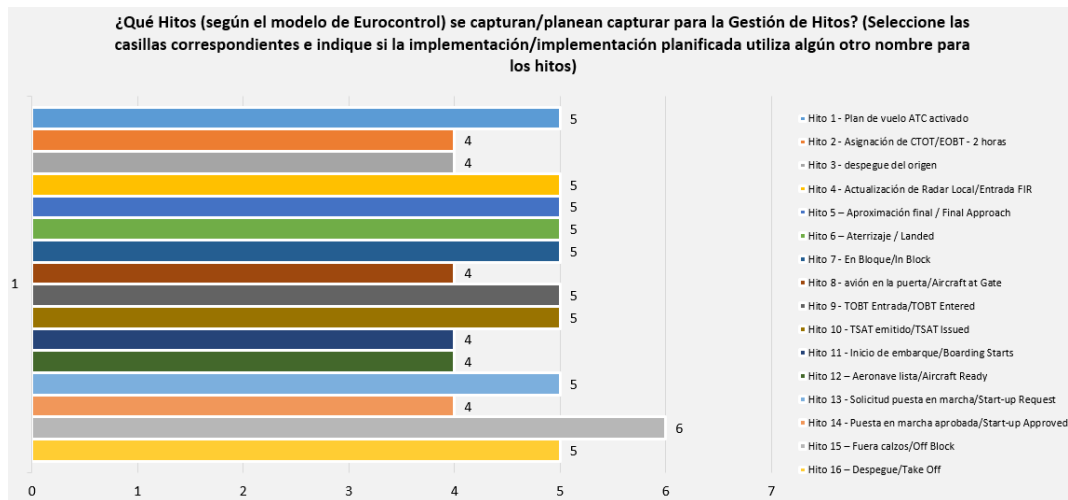


- A través de la plataforma de intercambio de información que recopila datos en tiempo real de varios sistemas. (sistema automatizado o semi automatizado)
- A través de la interacción manual y el intercambio de información.
- Una combinación de las dos alternativas anteriores.



Milestone approach

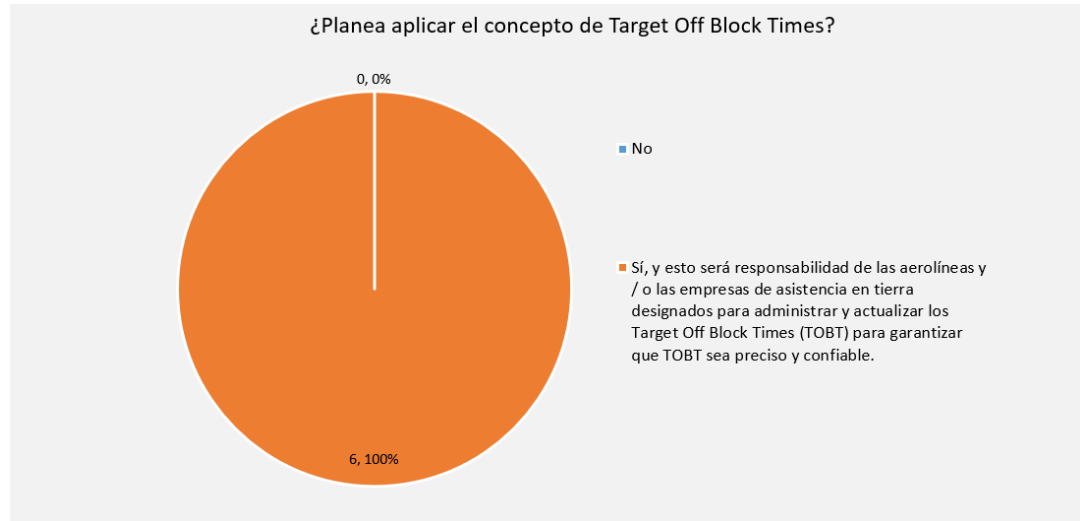
- Most States are in line with EUROCONTROL recommended milestones, however, there are some differences. For example, Milestone #3 “Take off from Outstation” is one of the most important milestones in order to facilitate automatic updates of TOBT, which is the base for TSAT calculations.





Applying TOBT

100% of results will implement TOBT and agreed that this will be the responsibility of the Airlines and/or appointed Ground Handlers to manage and update the Target Off Block Times (TOBT) in order to ensure that TOBT is accurate and reliable.

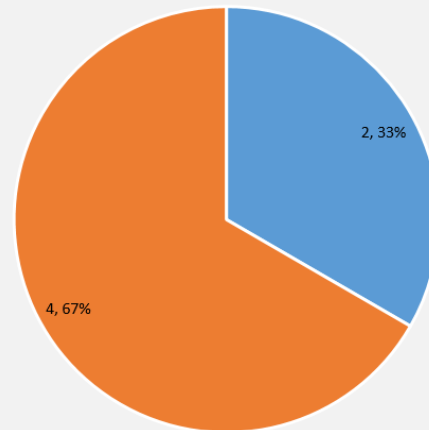




Methodology for calculating Variable Taxi Time

- Most States (67%) that replied agreed that they will implement Dynamic Variable Taxi Time using self-learning algorithms based on real-time and statistical surveillance data instead of “Table look up” using fixed taxi time from gates to runways.

¿Qué metodología se aplica / se va a aplicar para calcular el tiempo de taxi variable?



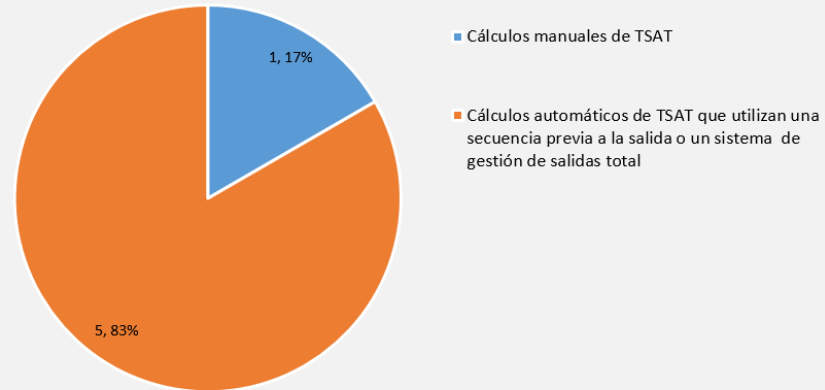
- “Table look up” que utiliza el tiempo de rodaje fijo desde las puertas hasta las pistas.
- Tiempo de taxi variable dinámico utilizando algoritmos de autoaprendizaje basados en datos de vigilancia estadísticos y en tiempo real



TSAT Calculations

Most States (83%) replied that they will have automatic TSAT calculations by using a PDS or DMAN, instead of a manual approach.

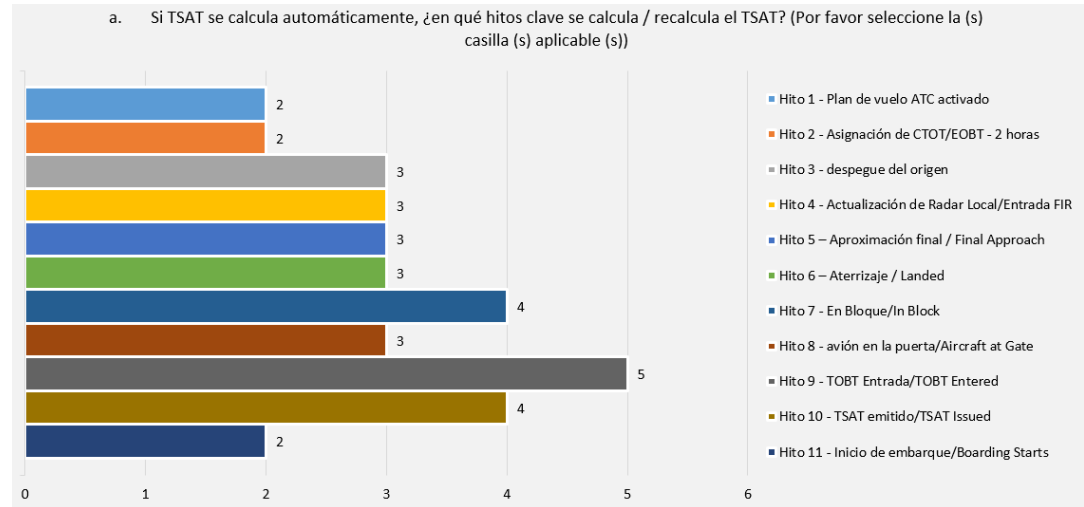
¿Cómo se calcula el Target Start-Up Approval Time (TSAT) como parte de la Secuencia de Pre-Salida?





If TSAT is automatic, when it is calculated or recalculated?

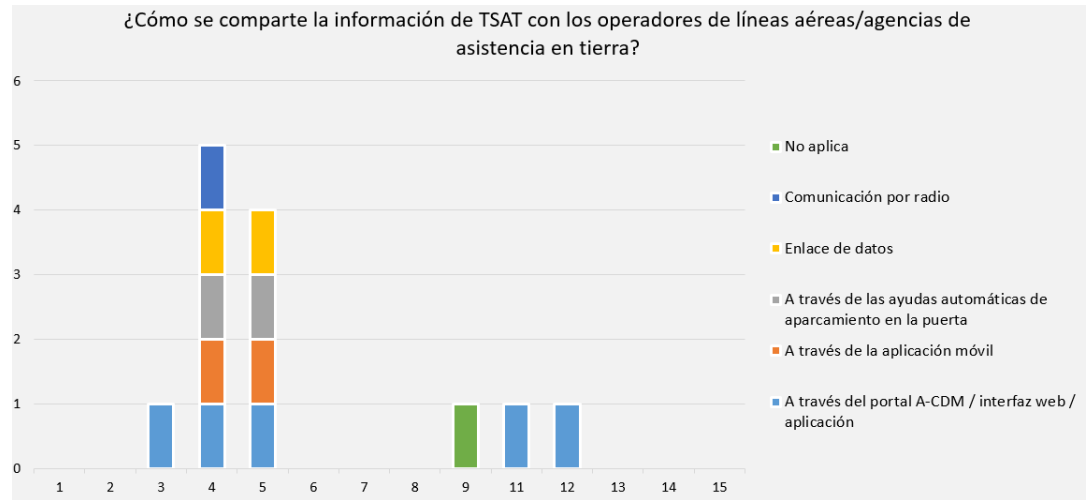
- Most implementations will recalculate the TSAT as the TOBT is entered.
- Interestingly, there are no TSAT calculations in the initial stages of the flight.





How TSAT is shared?

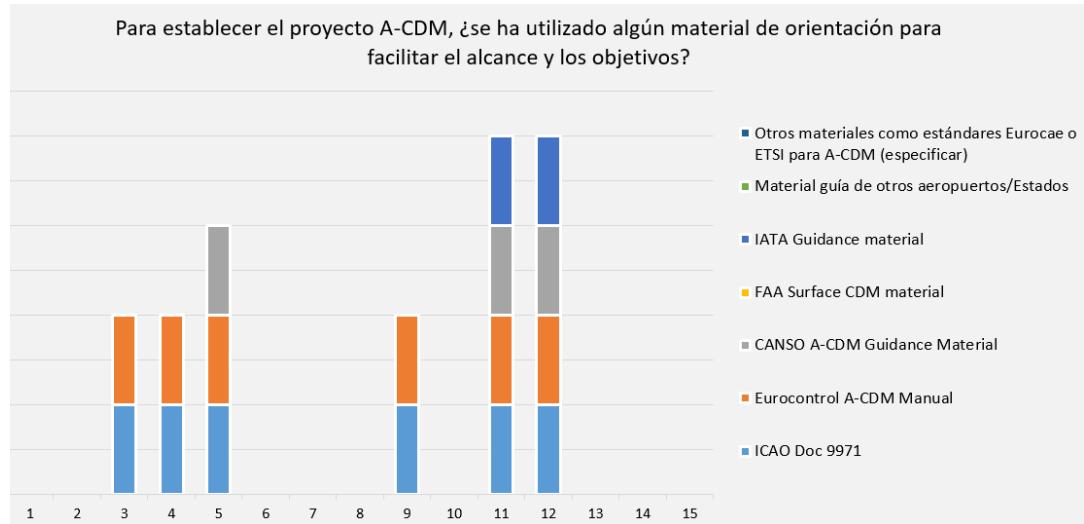
- The majority of respondents would be implementing a web portal or interface as the main means of communication of TSATs to other interested parties.
- Only two States responded to use more than one way.
- Interestingly, one of the States that uses more than one way has forgotten or avoided radio communication as a means to share TSAT information.
- Based on best practices in Europe, successful implementations are based on multiple ways to disseminate TSAT (and also TOBT) information.
- The way to ensure that the flight crew obtains the information is of particular importance from approximately 30 minutes before the TOBT and in the initial and pushback phases of the flight.





Guidance material

Most States use both ICAO and Eurocontrol guidance as a basis for their A-CDM implementations.

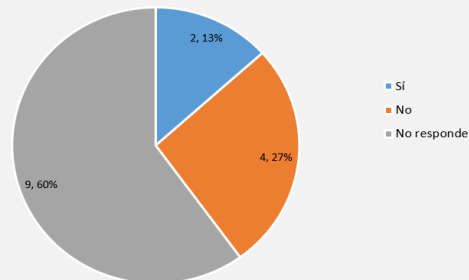




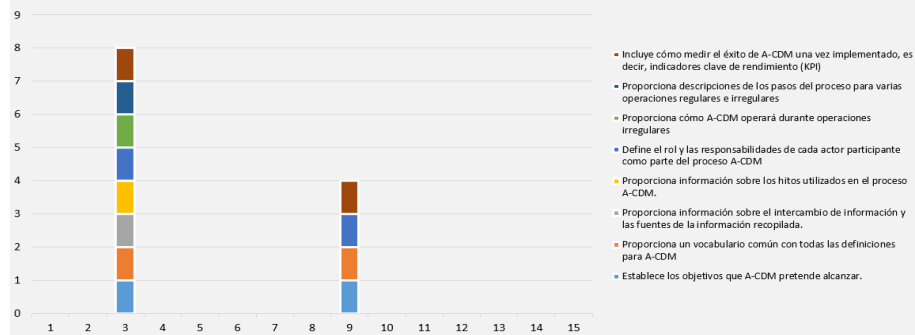
CONOPS

- Only 2 States that replied has implemented some kind of “concept of operations” document regarding A-CDM implementation.
- Of these 2 States, Brazil replied to incorporate almost all concepts on the document.

¿Se ha establecido un documento de “Concepto de operaciones” para la implementación de A-CDM?



a. En caso afirmativo, por favor indique el alcance del documento. (Por favor seleccione la (s) casilla (s) aplicable (s))

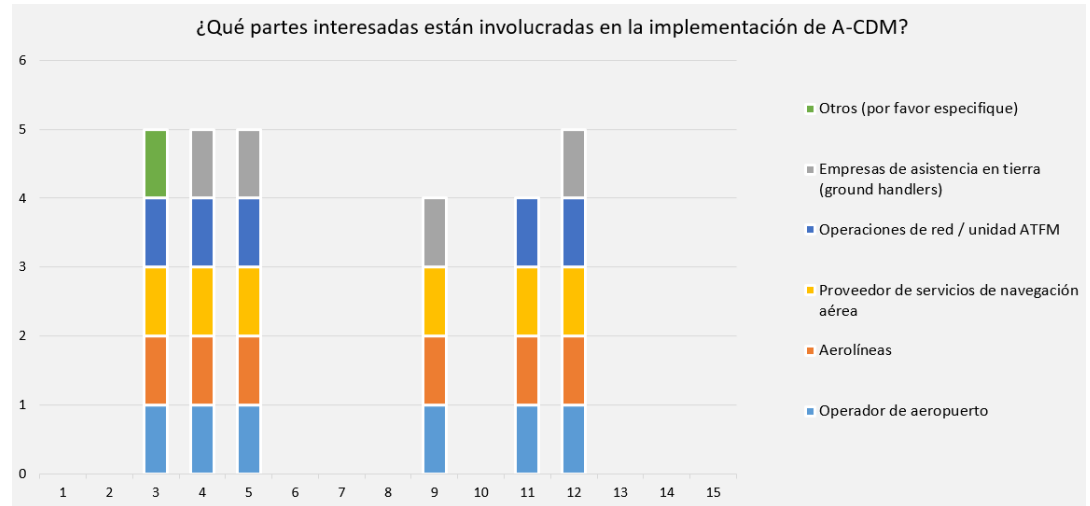




Stakeholders & partners

All States incorporate the key partners on the A-CDM implementation:

- Airport
- Airlines
- ANSPs

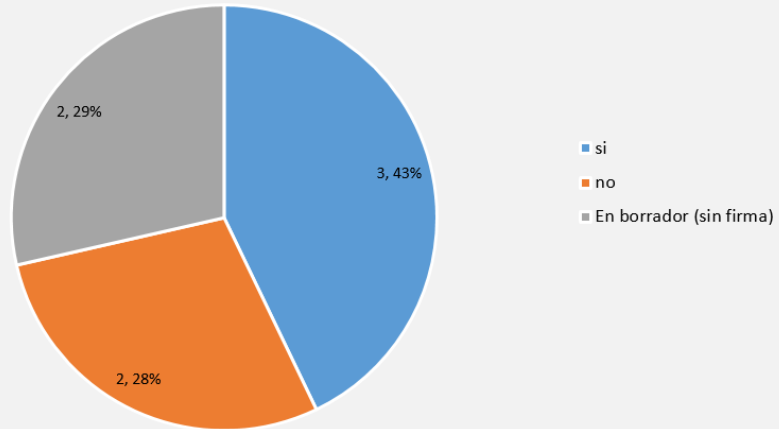




Memorandum of Understanding (MoU)

- 3 States report establishment of MOU in at least one of the A-CDM implementations.
- It should be noted that 2 States reported that they were working on MOUs but have not been signed to date.

¿Se ha establecido un Memorando de Entendimiento (MOU) entre las partes interesadas?

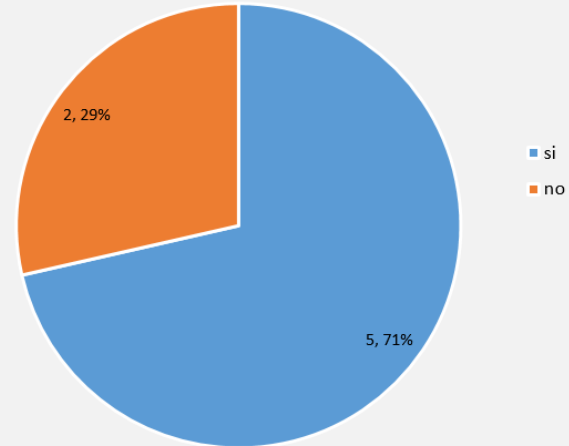




Project implementation

- A key piece of the implementation of the A-CDM is to work collaboratively and in a team.
- 71% of the implementations considered or will consider the creation of project groups for implementation.

¿Se ha establecido un grupo de proyecto con todos los interesados involucrados?

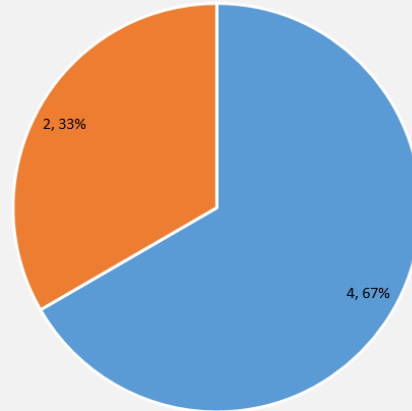




Shared leadership or “one organization” implementation?

67% of respondents who answered this question affirm that project management is based on a committee or group, while two States responded that only one organization leads the implementation.

¿Existe un liderazgo compartido o la gestión del proyecto está dirigida por una organización?

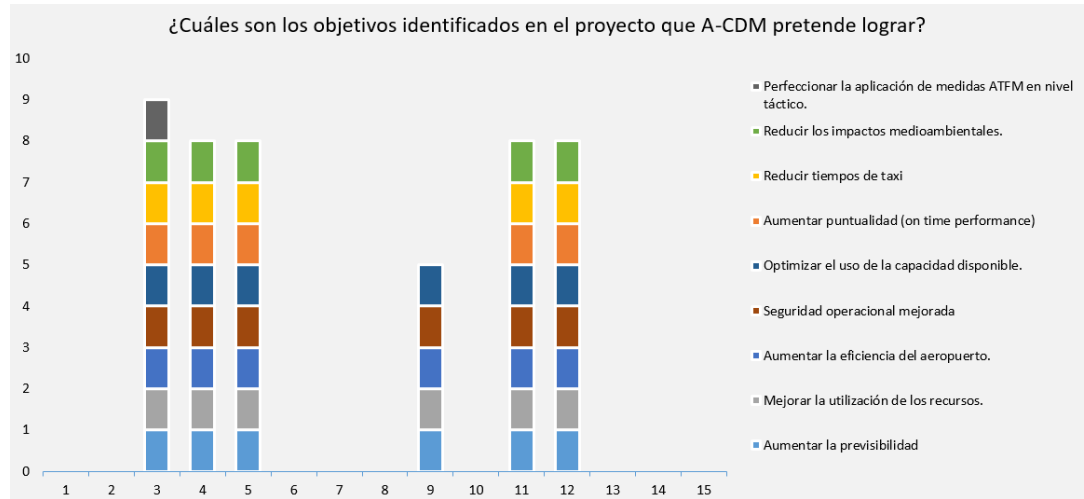


- Liderazgo compartido o por un grupo o comité
- Liderazgo de una sola organización



Implementation objectives

Regarding the objectives of the A-CDM, the majority responded that the increase in predictability, the best use of resources, increase the efficient use of the aerodrome, safety and optimize the use of available capacity are objectives of the implementation.

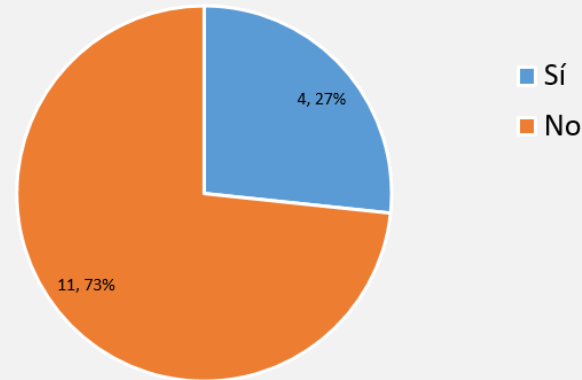




KPI's

To the question: *Has the project identified a more detailed Key Performance Framework with Key Performance Indicators to facilitate the measurements of the A-CDM implementation?*, about 4 States report that KPIs have been implemented despite the fact that 6 said they were in the process of being implemented.

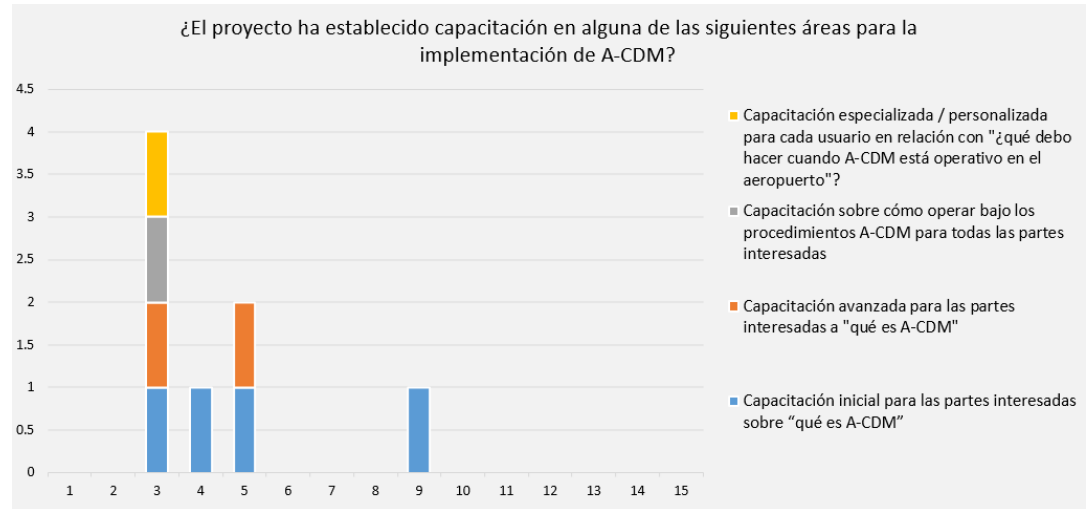
¿Ha identificado el proyecto un marco de rendimiento (key performance framework) más detallado con indicadores clave de rendimiento (kpi's) para facilitar las mediciones de la implementación de A-CDM?





Training

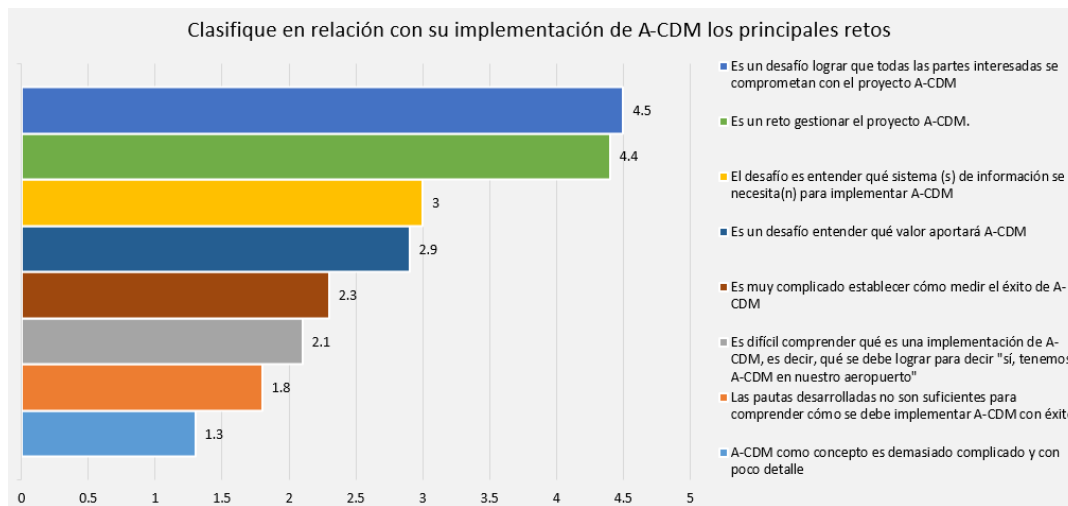
- The results demonstrate the low level of training available about this relatively new concept in the Region.
- Only one State has reported reaching the level of specialized training.





Challenges

- Most States agreed that It is challenging to get all stakeholders engaged and committed to the A-CDM project.
- There is an opportunity to work on this.





Summary

- Despite several scenarios with capacity problems in the region, the implementation of A-CDM is moving at a relatively low rate or the report by the States may not be representing what the airport operators are doing on their own.
- Some States have placed different timeframes (some short) for implementations, which could be an indication of an underestimation of the complexity and time really needed to implement A-CDM.
- The lack of commitment was indicated as one of the main challenge in the implementation. This assumes that there is, at the Regional or local level, not enough arguments or business case to support the effort in carrying out the implementation.



Summary

As in other regions, the survey results identify that some areas of attention are:

- **Relationship between the conceptual elements and the milestones of A-CDM.** These are discrepancies in the responses that indicate that the implementation of the milestones and their purpose may not be fully understood.
- **How to measure the success of an A-CDM implementation.** All respondents indicated very clear objectives related to the implementation of A-CDM, but at the same time not all have established how to measure that these objectives are achieved.
- **Involve all stakeholders,** as well as manage an A-CDM project.



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