International Civil Aviation Organization
CAR/SAM Regional Planning and Implementation Group (GREPECAS)

INFORMATION PAPER

ePPRC/04 — IP/09
20/04/22

GREPECAS Programmes and Projects Committee (PPRC) Fourth Virtual Meeting (ePPRC/04)
Online, 21 – 22 April 2022

Agenda Item 2: **Follow-up on the CAR/SAM Planning and Implementation Regional Group (GREPECAS) Programmes and Projects**
2.3 Progress on the Implementation of the GREPECAS ANS Dashboard

PROGRESS ON THE IMPLEMENTATION OF THE GREPECAS ANS DASHBOARD

(Presented by the Secretariat)

EXECUTIVE SUMMARY	
This Information Paper presents the progress and a prototype of the CAR/SAM Regional Dashboard to be able to report, monitor and follow up on the implementation of the air navigation elements and therefore can support the Annual Regional Air Navigation Report by the CAR/SAM Regions.	
Strategic Objectives:	• Air Navigation Capacity and Efficiency • Economic Development of Air Transport
Reference:	• Doc 9883 – *Manual on Global Performance of the Air Navigation System.*

1. Introduction

1.1 For better regional planning purposes, the development and maintenance of regional Air Navigation Plans (ANP) are carried out with the assistance of the Regional Offices by the regional planning and implementation groups of ICAO. The regional plans are derived from the Global Air Navigation Plan (GANP, Doc 9750), which considers the operational needs of States and users in general. Adjustments and updates will be made continuously with the support of the recommendations for improvement proposed by the members of the working groups and their coordinators. It is important that data analysis and results be carried out collaboratively. These recommendations will be available through the regional air navigation dashboard, in support of the determination of the necessary tactical adjustments.

2. Discussion

2.1 Another significant aspect of the Dashboard is the implementation of a measurement system allowing the State to visualize the actual implementation status and the expectations and/or the implementation goals. In order to support these tasks, a continuous collection of data and measurement is required to establish a representative data report. The GREPECAS will show the status of implementation through dynamic and interactive graphs, which will be available on the Dashboard. The system will generate ad-hoc reports, which will illustrate the collected data in the Regional Air Navigation Dashboard. This will be accomplished through the software program PowerBi that is already available and operational for the purpose of this task.

2.2 In addition, it is a priority to establish agreements (Memorandum of Understanding – MOUs, an example is on **Appendix A** (developed and presented by the DAWG) between stakeholders in order to obtain information related to the implementation status of the air navigation infrastructure with respect to the data providers. The confidentiality of the data and information will be monitored at all times. This information will assist in the development of the regional air navigation performance Dashboard. To achieve the objectives regarding the establishment of the Dashboard, it is necessary that the following factors are taken into account:

1. Exchange of information between the different interested parties, transparency and establishment of the same measurement parameters. Transparency and the exchange of data and information are essential.

2. Identify those responsible for providing, evaluating and feeding the dashboards, so that their information is always updated, according to the established levels.

3. Procedures for accessing and controlling the Dashboard website shall be established by means of username, password and the establishment of Points of Contact (PoCs).

2.3 For this Meeting, a version of the initial prototype of the GREPECAS Dashboard will be presented for review and comments during this meeting and will also be presented at the GREPECAS/20 meeting. **Appendix B** (developed and presented by the DAWG) illustrates an example report of this Dashboard, which also includes some the proposed initial indicators.

3. Conclusion

3.1 The Regional Dashboard (CAR/SAM) will provide relevant information from the air navigation areas, giving important data and information for planning, decision-making and the development of future activities based on coherent, easy-to-use information established according to a common language.

3.2 As a consequence, the establishment of the measurement mechanisms will provide the necessary information for continuous improvement, reminding, *"what is not measured, cannot be improved"*.

3.3 The involvement of the States is required to establish, within their own implementations, the same measurement indicators in a homogeneous way, so that the regional working groups also adopt the information of the regional indicators the same way.

3.4 It is concluded that a measurement mechanism comprising collection, processing, storage, as well as the graphical presentation of reports on indicators/metrics is available to States and is essential for the success of a performance-based approach.

3.5 The Meeting is invited to:

a) take note of the tasks and work necessary to complete this Dashboard, its procedures and other aspects for its operation; and

b) support any other action that due to this work is required of States, International Organizations and other stakeholders.

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APPENDIX A
Memorandum of Understanding Template
Plantilla de Memorando de Entendimiento

Prepared for:
Preparado para:

PartnerA.FirstName] [PartnerA.LastName]
[PartnerA.Company]
SocioA.Nombre] [SocioA.Apellido]
[SocioA.Empresa]

Created by:
Creado por:

[PartnerB.FirstName] [PartnerB.LastName]
[PartnerB.Company]
SocioB.Nombre] [SocioB.Apellido]
[SocioB.Empresa]

This memorandum of understanding (MoU) is an agreement between two or more parties who want to share information and data. This memorandum of understanding is drafted for future sharing, as well as possible partnerships and joint activities. The memorandum of understanding is a binding formal document. The MoU initiates the sharing relationship by describing the intentions of each party.
Este memorándum de entendimiento (MoU) es un acuerdo que dos o más partes celebran que desean compartir información y datos. Se redacta este memorando de entendimiento para futuras comparticiones, así como para posibles asociaciones y actividades conjuntas. El memorando de entendimiento es un documento formal vinculante. El MoU inicia la relación de compartición al describir las intenciones de cada parte.

This Memorandum of Understanding (MoU) is entered on the *(number)* day of *month)* n *(year)* (herein referred to as the “Effecitve Date”) into by and between:
Este Memorando de Entendimiento (MoU) se ingresa el (número) día de (mes) en (año) (en adelante, la "Fecha de entrada en vigencia") por y entre:

[PartnerA.FirstName] [PartnerA.LastName] of [PartnerA.Company] of [PartnerA.StreetAdress] [PartnerA.City] [PartnerA.State] [PartnerA.PostalCode] (herein referred to as "Partner A") and
[SocioA. Nombre] [SocioA. Apellido] de [SocioA. Compañia] de [SocioA. Dirección] [SocioA. Ciudad] [SocioA. Estado] [SocioA. Codigo Postal] (aquí referido como “SocioA.”) y

[PartnerB.FirstName] [PartnerB.LastName] of [PartnerB.Company] of [PartnerB.StreetAdress] [PartnerB.City] [PartnerB.State] [PartnerB.PostalCode] (herein referred to as “Partner B”).
[SocioB. Nombre] [SocioB. Apellido] de [SocioB. Compañia] de [SocioB. Dirección] [SocioB. Ciudad] [SocioB. Estado] [SocioB. Codigo Postal] (aquí referido como “SocioB.”).

Parties may be referenced individually as “Party” and collectively as “Parties”.
Las partes pueden ser referenciadas individualmente como "Parte" y colectivamente como "Partes".

Recitals:
Considerandos:

WHEREAS, Partner A is in the business of *(Enter specific activities here. Include information on the business' industry, specialized expertise, organizational mission, and other details relevant to the potential partnership).*
***POR CUANTO**, el Socio A está en el negocio de (Ingrese actividades específicas aquí. Incluya información sobre la industria del negocio, experiencia especializada, misión organizacional y otros detalles relevantes para la asociación potencial).*

WHEREAS, Partner B is in the business of *(Enter specific, relevant activities here).*
POR CUANTO, el Socio B está en el negocio de (Ingrese actividades específicas y relevantes aquí).

WHEREAS, Partner A wishes to (Enter Partner A's intent for the partnership. For example: "to engage with a strategic partner for specialized activities" or "to engage with a partner for better safety development and better decision-making of decisions").
POR CUANTO, el Socio A desea (Ingrese la intención del Socio A para la asociación. Por ejemplo: "comprometerse con un socio estratégico para actividades especializadas" o "comprometerse con un socio para lograr un mejor desarrollo de la seguridad operacional y una mejor toma de decisiones").

WHEREAS, Partner B desires to *(Enter Partner B's intention for the partnership).*
POR CUANTO, el Socio B desea (Ingrese la intención del Socio B para la asociación).

WHEREAS, Parties collectively desire to enter into this MOU to memorialize the terms and conditions of their anticipated collaboration.
POR CUANTO, las Partes colectivamente desean celebrar este MoU para conmemorar los términos y condiciones de su colaboración anticipada.

NOW, THEREFORE, the Parties agree to the following terms and conditions:
AHORA, POR LO TANTO, las Partes acuerdan los siguientes términos y condiciones:

A. Purpose
A proposito

The purpose of this MoU is to establish a good-faith foundation between the Parties for future collaborative efforts that are mutually beneficial. The Parties agree to work together in a cooperative and coordinated manner to achieve each Party's individual desires and the collective desires of the partnership.
El propósito de este MoU es establecer una base de buena fe entre las Partes para futuros esfuerzos de colaboración que sean mutuamente beneficiosos. Las Partes acuerdan trabajar juntas de manera cooperativa y coordinada para lograr los deseos individuales de cada Parte y los deseos colectivos de la asociación.

This MoU is designed to detail the specific elements of the working relationship between the Parties to vet the success of the potential collaboration. This MoU does not obligate the Parties to provide funds or payment. This MoU does not bind Parties to any legal obligations.

Este MoU está diseñado para detallar los elementos específicos de la relación de trabajo entre las Partes para evaluar el éxito de la posible colaboración. Este MoU no obliga a las Partes a proporcionar fondos o pagos. Este MoU no vincula a las Partes con ninguna obligación legal.

By their nature, MoU is not legally binding. Instead, these documents serve as a paper trail for parties interested in doing activities together. Each party must dedicate time and effort to draft and understand the terms of their collaborative interests. Because MoU do not hold up to legal challenges, you do not need to list long-winded provisions such as governing law, severability, or binding in your memorandum of understanding.
Por su naturaleza, el MoU no son legalmente vinculantes. En cambio, estos documentos sirven como prueba documental para las partes interesadas en hacer actividades juntos. Cada parte debe dedicar tiempo y esfuerzo para redactar y comprender los términos de sus intereses de colaboración. Debido a que el MoU no resiste los desafíos legales, no es necesario que enumere disposiciones prolijas, como la ley aplicable, la separabilidad o la vinculación en su memorando de entendimiento.

B. Roles and responsibilities
B. Funciones y responsabilidades

To achieve Parties' mutual desires, each party agrees to the following roles and responsibilities:
Para lograr los deseos mutuos de las Partes, cada parte acepta los siguientes roles y responsabilidades:

- Roles and responsibilities of Partner A will include (Enter Partner A's responsibilities here. Please be as specific as possible and list information directly related to Partner A's activities and wishes as stated in the recitals. Include details such as requirements for reports, dates of activities, deadlines, and other pertinent information that should be taken into account).
- Las funciones y responsabilidades del Socio A incluirán (Ingrese las responsabilidades del Socio A aquí. Sea lo más específico posible y enumere la información directamente relacionada con las actividades y los deseos del Socio A como se indica en los considerandos. Incluya detalles como requisitos de informes, fechas de actividades, fechas límite, y otra información pertinente que debe tenerse en cuenta).

- Partner B Roles and Responsibilities shall include *(Enter Partner B's responsibilities).*

- Parties agree to uphold their roles and responsibilities in a committed, good-faith manner.

- Las funciones y responsabilidades del Socio B incluirán (Ingrese las responsabilidades del Socio B).

- Las partes acuerdan cumplir con sus roles y responsabilidades de manera comprometida y de buena fe.

C. Resources
C. Recursos

To further the relationship between the Parties, the Parties agree to provide the following resources.
Para promover la relación entre las Partes, las Partes acuerdan proporcionar los siguientes recursos.

Part A will provide (Enter resources here. This would include provision of data and information, provision of support, dedication of specialized staff, application of technology, or related resources. As always, please be specific and include a description of the resources and of specialized skills and other pertinent information that should be noted).
La Parte A proporcionará (Ingrese los recursos aquí. Esto incluiría el suministro de datos e información la prestación de apoyo, la dedicación de personal especializado, la aplicación de tecnología o recursos relacionados. Como siempre, sea específico e incluya la descripción los recursos y de habilidades especializadas y otra información pertinente que deba ser señalado).

Party B shall provide *(Enter resources here):*
La Parte B deberá proporcionar (Ingrese los recursos aquí):

–
– …

Parties agree to provide the resources above at a minimum. The Parties may agree to provide additional resources in future agreements.
Las partes acuerdan proporcionar los recursos anteriores como mínimo. Las Partes pueden acordar proporcionar recursos adicionales en futuros acuerdos.

D. Confidentiality
D. Confidencialidad

Parties agree that they each use confidential, sensitive information to achieve their individual goals. Due to the nature of the Parties' activities and intent to establish a working relationship together, confidential information may be shared between the Parties.
Las partes acuerdan que cada una de ellas utiliza información confidencial y sensible para lograr sus objetivos individuales. Debido a la naturaleza de las actividades de las Partes y la intención de establecer una relación de trabajo en conjunto, las Partes pueden compartir información confidencial.

The Parties agree to keep all confidential information and organizational secrets in the strictest confidence during the relationship. The parties may not share any disclosed confidential information with unauthorized third parties. The parties may, at their discretion, enter into a Confidentiality Agreement to ensure that confidential information and trade secrets are kept confidential.
Las Partes acuerdan mantener toda la información confidencial y los secretos organizacionales en la más estricta confidencialidad durante la relación. Las partes no pueden compartir ninguna información confidencial divulgada con terceros no autorizados. Las partes pueden, a su discreción, celebrar un Acuerdo de confidencialidad para garantizar que la información confidencial y los secretos comerciales se mantengan confidenciales.

The MoU is not legally binding. However, the inclusion of a confidentiality provision in your MoU explains that you intend to keep confidential information and organizational secrets private during the relationship between the parties. Specify that the Parties may choose to keep confidential information confidential by entering into an additional specific confidentiality agreement, which is more legally binding than this MOU.
El MoU no es legalmente vinculantes. Sin embargo, la inclusión de una disposición de confidencialidad en su MoU explica que tiene la intención de mantener la información confidencial y los secretos

organizacionales privados durante la relación entre las partes. Especifique que las Partes pueden optar por mantener la confidencialidad de la información confidencial mediante la celebración de un acuerdo adicional específico de confidencialidad, que es más vinculante legalmente que este memorando de entendimiento.

E. Entire agreement
E. Acuerdo completo

The Parties agree that this MoU represents the most current agreement between the Parties and supersedes all other prior written or oral agreements. If the Parties wish to update the terms or adjust the provisions of this MoU, the Parties shall do so by drafting and signing a new MoU or partnership agreement.
Las Partes acuerdan que este MoU representa el acuerdo más actual entre las Partes y reemplaza todos los demás acuerdos escritos u orales previos. Si las Partes desean actualizar los términos o ajustar las disposiciones de este MoU, las Partes deberán hacerlo mediante la redacción y firma de un nuevo MoU o contrato de asociación.

F. Term and termination
F. Plazo y rescisión

This agreement shall be effective from the Effective Date of this MoU until *(MoU end date)*. Both Parties may terminate this MoU by means of signing a termination addendum.
The undersigned Parties acknowledge and agree to this MoU:
Este acuerdo entrará en vigencia a partir de la Fecha de entrada en vigencia de este MoU hasta (fecha de finalización del MoU). Ambas Partes pueden rescindir este MoU mediante la firma de un anexo de rescisión.
Las Partes abajo firmantes reconocen y aceptan este MoU:

[Sender.Company]	[Client.Company]
Signature	**Signature**
MM/DD/YYYY	MM/DD/YYYY
[Sender.FirstName][Sender.LastName]	[Client.FirstName][Client.LastName]
[Remitente.Empresa]	[Cliente.Empresa]
Firma	**Firma**
MM/DD/YYYY	MM/DD/YYYY
[Remitente.Nombre] [Remitente.Apellido]	[Cliente.Nombre] [Cliente.Apellido]

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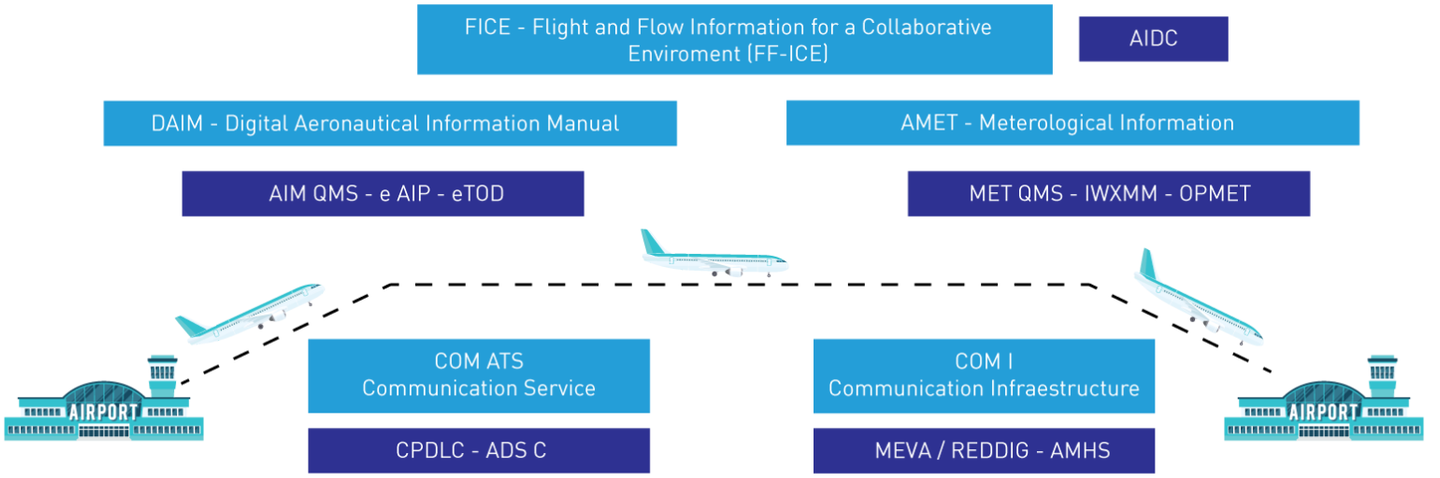
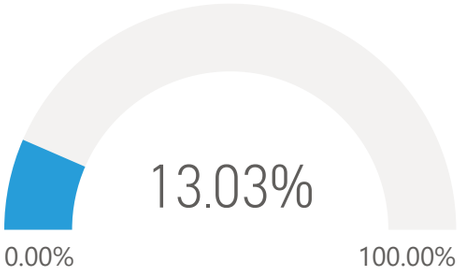
ICAO | OACI

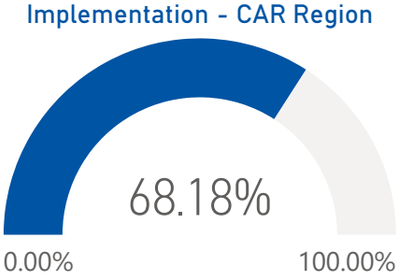
GREPECAS Q3/21

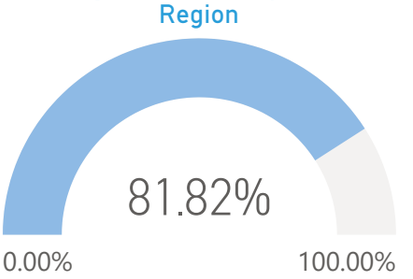
Quarterly ANS Implementation Report CAR/SAM Regions

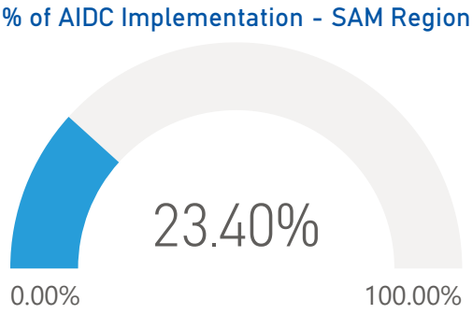
Data valid as of **13 April 2022**

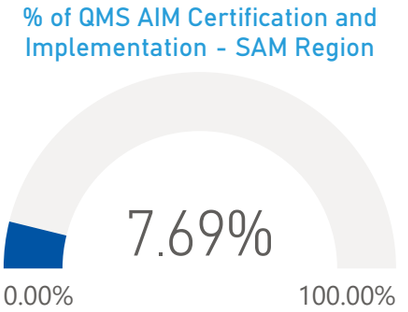


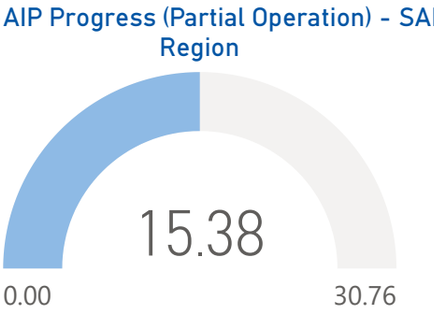


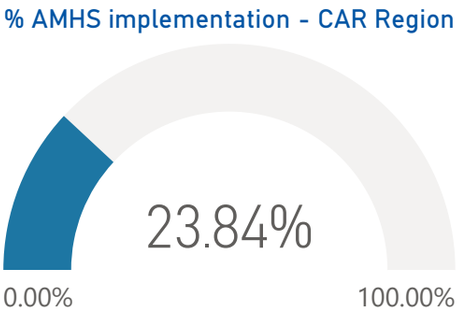


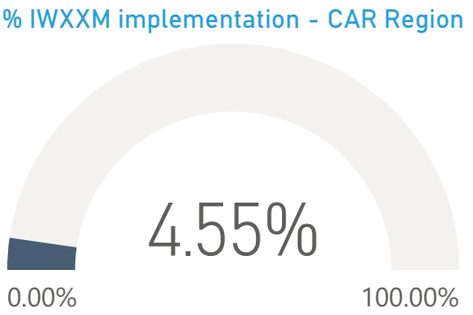


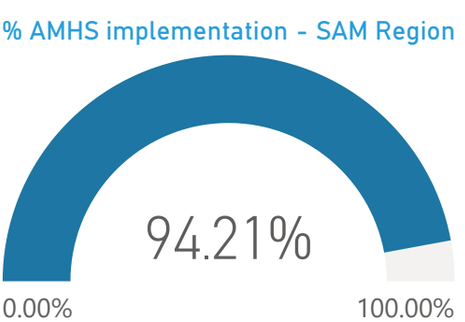


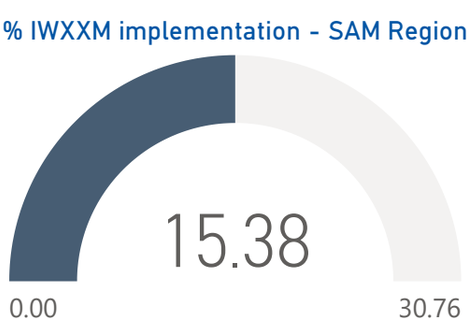












FICE - Flight and Flow Information for a Collaborative Enviroment (FF-ICE)

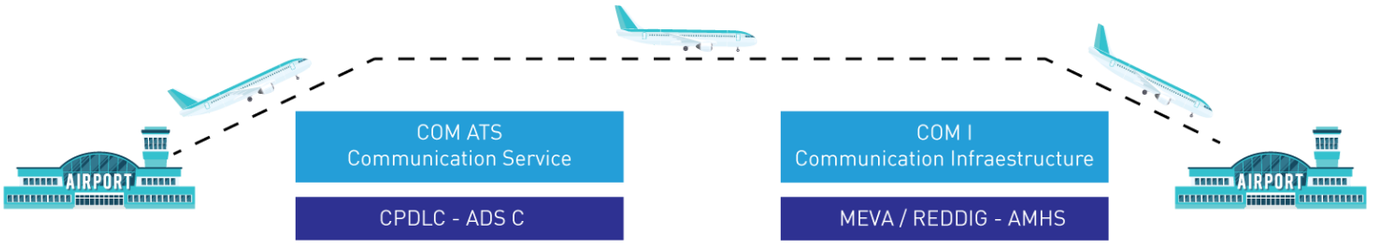
AIDC

DAIM - Digital Aeronautical Information Manual

AMET - Meterological Information

AIM QMS - e AIP - eTOD

MET QMS - IWXMM - OPMET



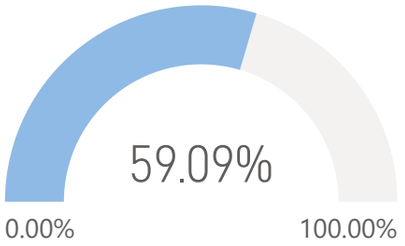
COM ATS
Communication Service

COM I
Communication Infraestructure

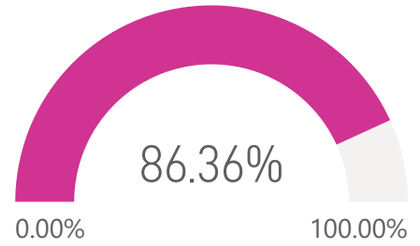
CPDLC - ADS C

MEVA / REDDIG - AMHS

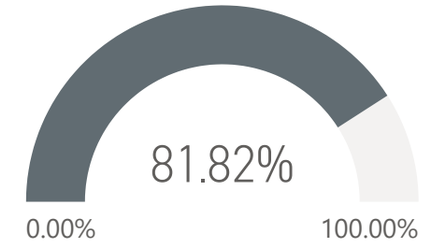
% eTOD Implementation - Area 2A - CAR Region



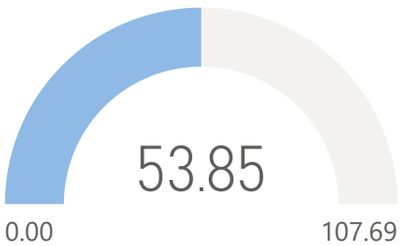
% eTOD Implementation - >1.2% trajectory - CAR Region



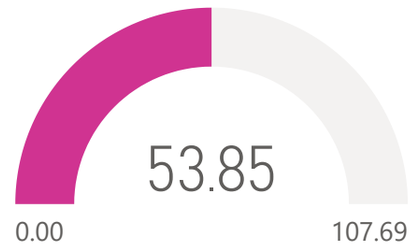
% eTOD Implementation - OLS Penetration - CAR Region



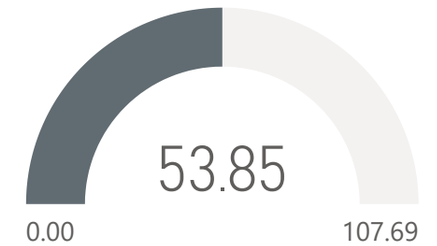
% eTOD Implementation - Area 2A - SAM Region



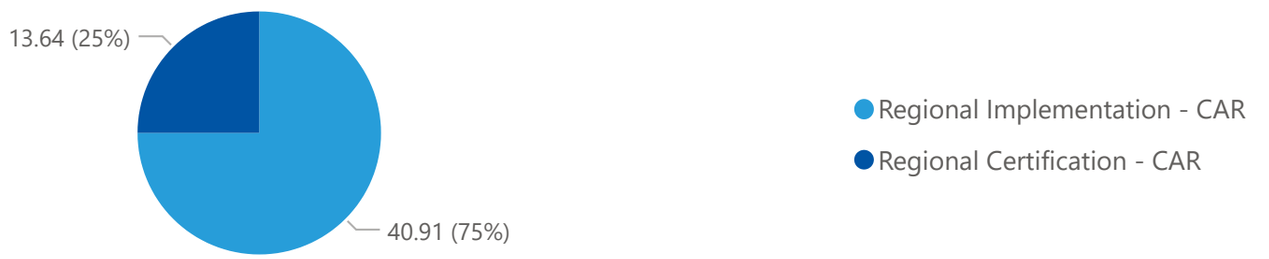
% eTOD Implementation - >1.2% trajectory - SAM Region



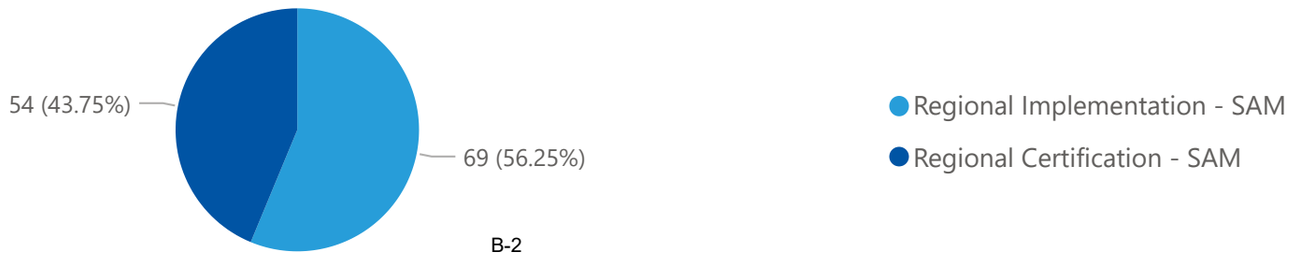
% eTOD Implementation - OLS Penetration - SAM Region

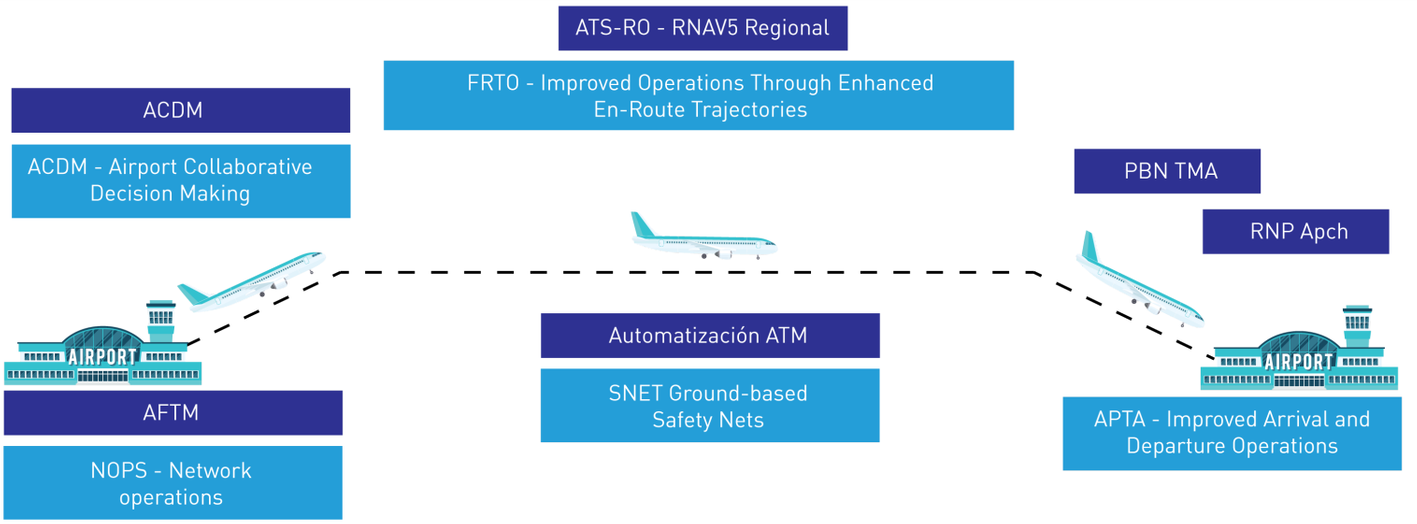


% QMS MET certification and implementation - CAR Region

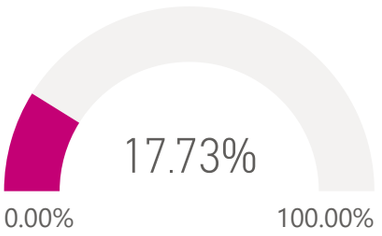


% QMS MET certification and implementation - SAM Region

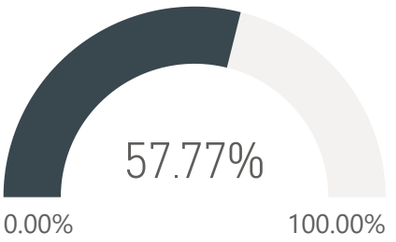




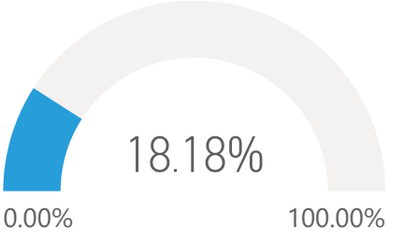
% of International Aerodromes that have implemented airport operations enhancement through A-CDM (Applicable = High Density) - CAR Region



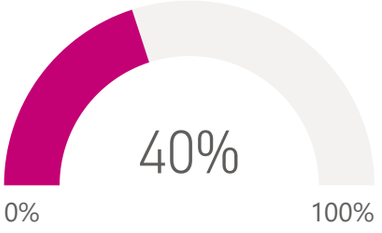
% of implemented APCH RNP (APV Minimums) on IFR RWY - CAR Region



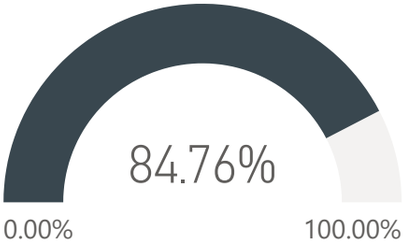
% of implemented AFTM dependencies (FMP/FMU) - CAR Region



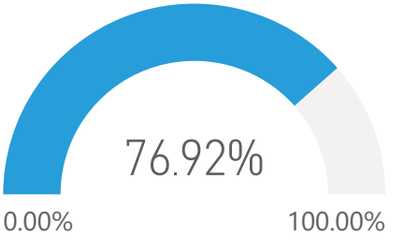
% of International Aerodromes that have implemented airport operations enhancement through A-CDM (Applicable = High Density) - SAM Region



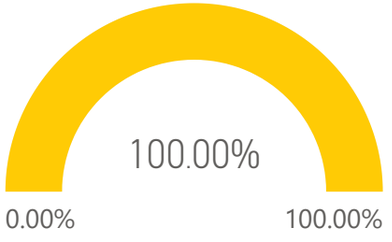
% of implemented APCH RNP (APV Minimums) on IFR RWY - SAM Region



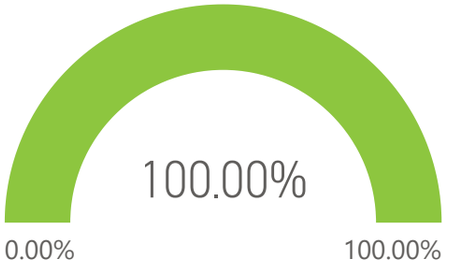
% of implemented AFTM dependencies (FMP/FMU) - SAM Region



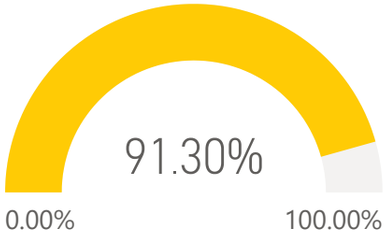
% STAR PBN Routes for IFR RWY - CAR Region



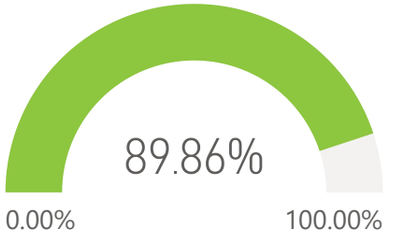
% SID PBN Routes for IFR RWY - CAR Region



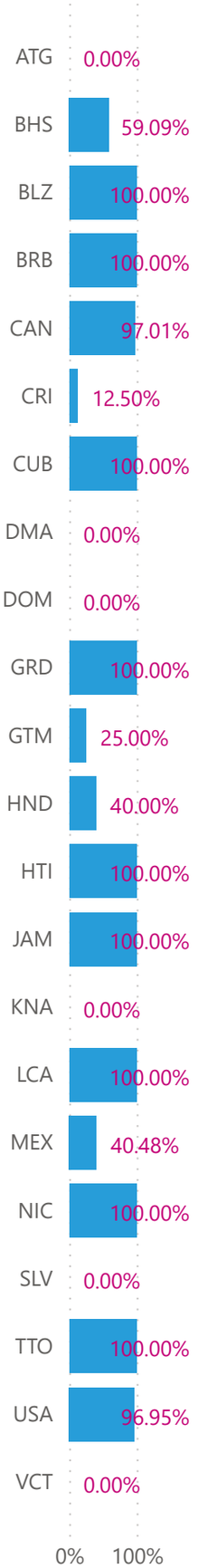
% STAR PBN Routes for IFR RWY - SAM Region



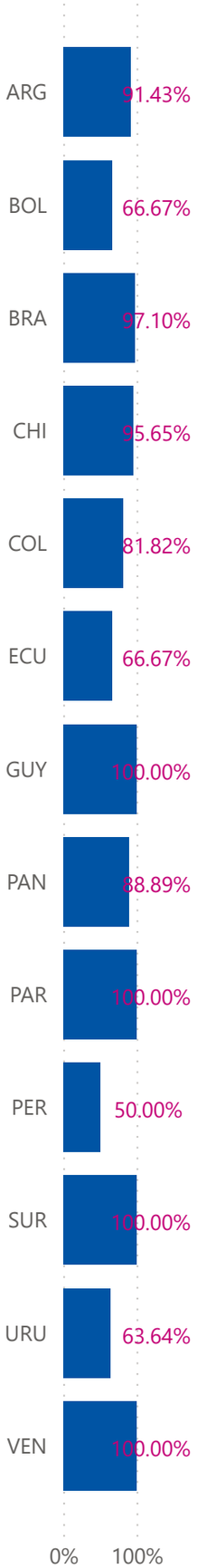
% SID PBN Routes for IFR RWY - SAM Region



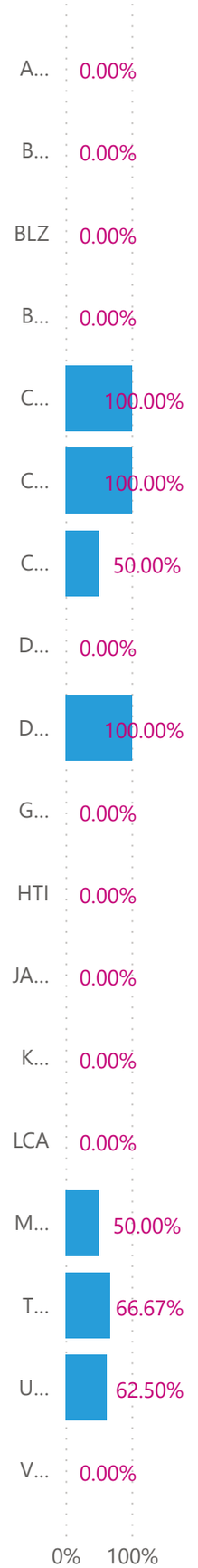
APV % Regional Implementation by State - CAR Region



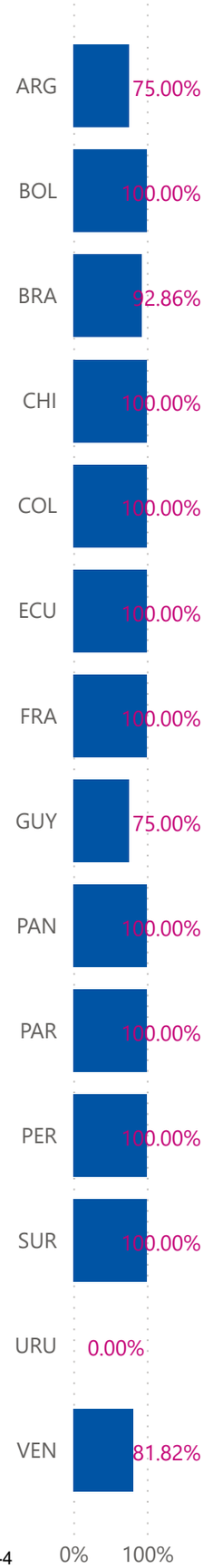
APV % Regional Implementation by State - SAM Region



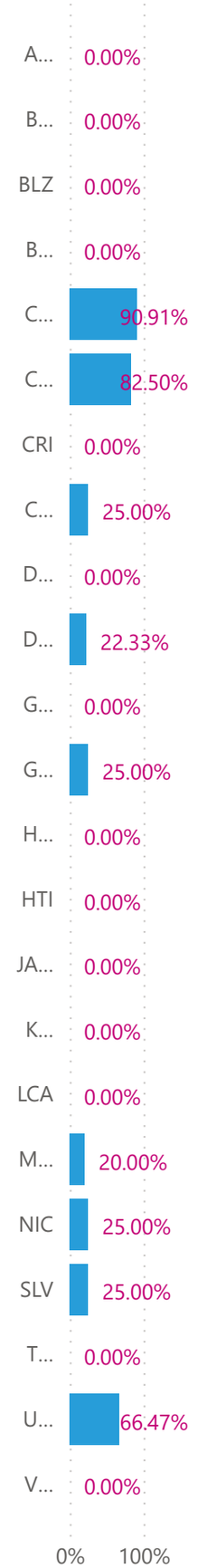
AMHS % Regional Implementation by State - CAR Region



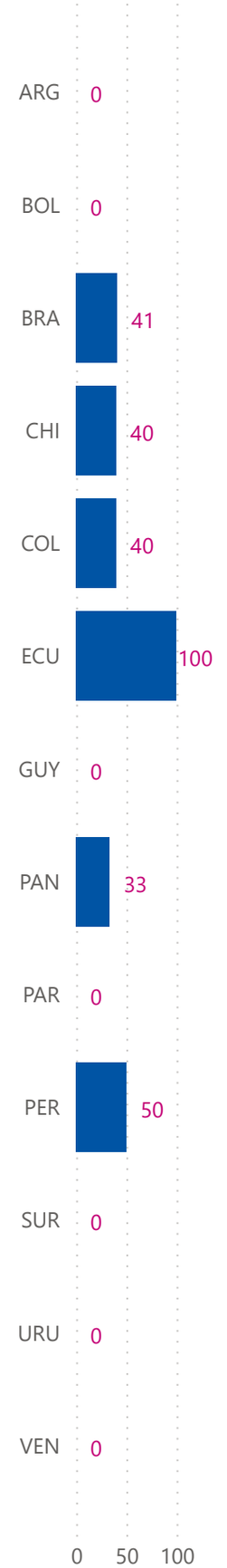
AMHS % Regional Implementation by State - SAM Region



AIDC % Regional Implementation by State - CAR Region



AIDC % Regional Implementation by State - SAM Region



ATFM Regional Implementation by State - CAR Region

State	Implemented
ATG	✗
BHS	✗
BLZ	✗
BRB	✗
CAN	✓
CRI	✗
CUB	✗
DMA	✗
DOM	✓
GRD	✗
GTM	✗
HND	✗
HTI	✗
JAM	✗
KNA	✗
LCA	✗
MEX	✓
NIC	✗
SLV	✗
TTO	✗
USA	✓
VCT	✗
Total	**4**

ATFM Regional Implementation by State - SAM Region

State	Implemented
ARG	✓
BOL	✓
BRA	✓
CHI	✓
COL	✓
ECU	✓
GUY	✓
PAN	✓
PAR	✓
PER	✓
SUR	✓
URU	✓
VEN	✓
Total	**13**

AIM QMS Regional Implementation by State - CAR Region

State	Implemented
	✓
ATG	✓
BHS	✓
BLZ	✓
BRB	✓
CAN	✓
CRI	✓
CUB	✓
DMA	✓
DOM	✓
GRD	✓
GTM	✓
HND	✓
HTI	✓
JAM	✓
KNA	✓
LCA	✓
MEX	✓
NIC	✓
SLV	✓
TTO	✓
USA	✓
VCT	✓
Total	**23**

AIM QMS Regional Implementation by State - SAM Region

State	Implemented
ARG	✓
BOL	✓
BRA	✓
CHI	✓
COL	✓
ECU	✓
GUY	✓
PAN	✓
PAR	✓
PER	✓
SUR	✓
URU	✓
VEN	✓
Total	**13**

MET QMS Regional Implementation by State - CAR Region

State	Implemented
ATG	✗
BHS	✗
BLZ	✓
BRB	✗
CAN	✗
CRI	✗
CUB	✓
DMA	✗
DOM	✓
GRD	✗
GTM	✗
HND	✗
HTI	✗
JAM	✓
KNA	✗
LCA	✗
MEX	✓
NIC	✓
SLV	✓
TTO	✓
USA	✓
VCT	✗
Total	**9**

MET QMS Regional Implementation by State - SAM Region

State	Implemented
ARG	✓
BOL	✓
BRA	✓
CHI	✓
COL	✓
ECU	✗
GUY	✓
PAN	✓
PAR	✓
PER	✓
SUR	✗
URU	✗
VEN	✗
Total	**9**

ACDM Regional Implementation by State - CAR Region

State	Implemented
	✓
ATG	✓
BHS	✓
BLZ	✓
BRB	✓
CAN	✓
CRI	✓
CUB	✓
DMA	✓
DOM	✓
GRD	✓
GTM	✓
HND	✓
HTI	✓
JAM	✓
KNA	✓
LCA	✓
MEX	✓
NIC	✓
SLV	✓
TTO	✓
USA	✓
VCT	✓
Total	**23**

ACDM Regional Implementation by State - SAM Region

State	Implemented
ARG	✗
BRA	✓
CHI	✓
COL	✓
PAN	✓
PER	✓
Total	**120.00%**

			KPI ID																	
Variable	**Descripción**	**Potencial Proveedor**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**
STA	Scheduled Time Arrival	Concesionario														x					
AOBT	Actual off-block time	Registro de movimiento de Aeronaves/ OOOI data: gate “out” (AOBT), wheels “off,” wheels “on,” and gate “in” (AIBT) actual times.	x	x													x				
ALDT	Actual landing time	Registro de movimiento de Aeronaves								x		x	x		x						
ATOT	Actual Take-off time	Registro de movimiento de Aeronaves		x	x							x	x								
SIBT	Scheduled in-block time	Concesionario														x					
AIBT	Actual in-block time	Airports (airport operations), airlines, (OOOI data), ADS-B data providers and/or ANSPs													x	x	x				
CTOT	Calculated Take-off time	Airports, ATFM service			x				x					x							
ETOT	Estimated Take-off time	ATFM							x				x	x							
ELDT	Estimated landing time	Airports											x								
STD	Scheduled Time of departure	Concesionario	x																		
SOBT	Scheduled Off-block time	Concesionario	x																		
Wheels on		Registro de movimiento de Aeronaves/ OOOI data: gate “out” (AOBT), wheels “off,” wheels “on,” and gate “in” (AIBT) actual times.															x				
Wheels off		Registro de movimiento de Aeronaves/ OOOI data: gate “out” (AOBT), wheels “off,” wheels “on,” and gate “in” (AIBT) actual times.															x				
Arrival airport		For variant 1: ANSPs; For variant 2: Trajectory data providers (reporting archived actual trajectories based on ADS-B and/or other surveillance data sources) and/or ANSPs				x														x	
Landing runway ID		Airlines (OOOI data), airports, ADS-B data providers and/or ANSPs								x											
Departure airport		For variant 1: ANSPs; For variant 2: Trajectory data providers (reporting archived actual trajectories based on ADS-B and/or other surveillance data sources) and/or ANSPs				x	x													x	
Maximum cruise Flight Level		For variant 1: ANSPs; For variant 2: Trajectory data providers (reporting archived actual trajectories based on ADS-B and/or other surveillance data sources) and/or ANSPs																			x
Departure Gate ID (Optional)		Airports (airport operations, A-CDM), airlines (OOOI data), ADS-B data providers and/or ANSPs		x																	
Take-off runway ID (optional)		Airports (airport operations, A-CDM), airlines (OOOI data), ADS-B data providers and/or ANSPs		x																	
ADR	Airport Departure Rates	Medición Capacidad de pista									x										
AAR	Airport Acceptance Rates	Medición Capacidad de pista									x										
Arrival airport ARP coordinates		Líneas Aéreas																			x
Departure airport ARP coordinates		Líneas Aéreas																	x		
Declared total capacity of the airport		Airports											x								
Entry point in the ‘Reference area’ (Point O)		Sistema ATM				x	x														
Exit point from the ‘Reference area’ (Point D)		Sistema ATM				x	x														
Entry points in the ‘Measured areas’ (Points N)		Sistema ATM				x	x														

Delay code associated with the flow restriction		ATFM							x					x							
Exit points from the 'Measured areas' (Points X)		Sistema ATM				x	x														
Planned distance for each NX portion of the flight		Sistema ATM				x															
Scheduling parameters for slot controlled airports		Medición Capacidad de pista									x										
ID of the flow restriction generating the ATFM delay		ATFM							x					x							
Airspace volume associated with the flow restriction		ATFM							x												
4D data points (latitude, longitude, altitude and time)		Líneas Aéreas																	x		x
For each time interval: Declared landing capacity of the airport		Airports											x								
Airport or terminal airspace volume associated with the flow restriction		ATFM												x							
Terminal airspace entry time, computed from surveillance data (radar, ADS-B…)		Airlines (OOOI data), airports, ADS-B data providers and/or ANSPs								x											
Distance flown for each NX portion of the actual flight trajectory, derived from surveillance data (radar, ADS-B…)		Sistema ATM					x														
Terminal airspace entry segment, computed from surveillance data (radar, ADS-B…)		Airlines (OOOI data), airports, ADS-B data providers and/or ANSPs								x											
The various capacities are determined by the ANSP, and are dependent on traffic pattern, sector configuration, ATCO and system capability, etc.		ANSPs						x													

VOL III	KPI	Nombre	V1	V2	V3	V4	V5	V6	V7	Proveedores
x	KPI 01	Departure Punctuality	STD/SOBT	AOBT						Concesionario
x	KPI 04	Filed flight plan en-route extension	Departure airport (Point A)	Destination airport (Point B)	Entry point in the 'Reference area' (Point O)	Exit point from the 'Reference area' (Point D)	Entry points in the 'Measured areas' (Points N)	Exit points from the 'Measured areas' (Points X)	Planned distance for each NX portion of the flight	Sistema ATM
x	KPI 05	Actual en-route extension	Departure airport (Point A)	Destination airport (Point B)	Entry point in the 'Reference area' (Point O)	Exit point from the 'Reference area' (Point D)	Entry points in the 'Measured areas' (Points N)	Exit points from the 'Measured areas' (Points X)	Distance flown for each NX portion of the actual flight trajectory, derived from surveillance data (radar, ADS-B…)	Sistema ATM
x	KPI 09	Airport peak capacity	Scheduling parameters for slot controlled airports	Airport Acceptance Rates (AAR), Airport Departure Rates (ADR)						Medición Capacidad de pista
x	KPI 10	Airport peak throughput	ALDT	ATOT						Registro de movimiento de Aeronaves
x	KPI 14	Arrival Punctuality	STA	SIBT	AIBT					Concesionario
x	KPI 15	Flight time variability	AOBT	Wheels off	Wheels on	AIBT				Registro de movimiento de Aeronaves/ OOOI data: gate "out" (AOBT), wheels "off," wheels "on," and gate "in" (AIBT) actual times.
x	KPI17	Level-off during climb	4D data points (latitude, longitude, altitude and time)	Departure airport ARP coordinates						Líneas Aéreas
x	KPI19	Level-off during descent	4D data points (latitude, longitude, altitude and time)	Arrival airport ARP coordinates						Líneas Aéreas
	KPI 02	Taxi out additional time	AOBT	ATOT	Departure Gate ID (Optional)	Take-off runway ID (optional)				Airports (airport operations, A-CDM), airlines (OOOI data), ADS-B data providers and/or ANSPs
	KPI 03	ATFM slot adherence	CTOT	ATOT						Airports, ATFM service
	KPI 06	En-route airspace capacity	The various capacities are determined by the ANSP, and are dependent on traffic pattern, sector configuration, ATCO and system capability, etc.							ANSPs
	KPI 07	En-route ATFM delay	ETOT	CTOT	ID of the flow restriction generating the ATFM delay	Airspace volume associated with the flow restriction	Delay code associated with the flow restriction			ATFM
	KPI 08	Additional time in terminal airspace	For each arriving flight:Terminal airspace entry time, computed from surveillance data (radar, ADS-B…)	ALDT	In addition, for the advanced KPI variants: Terminal airspace entry segment, computed from surveillance data (radar, ADS-B…)	Landing runway ID				Airlines (OOOI data), airports, ADS-B data providers and/or ANSPs
	KPI 11	Airport throughput efficiency	ALDT	ATOT	ELDT	ETOT	For each time interval: Declared landing capacity of the airport	Declared total capacity of the airport		Airports
	KPI 12	Airport/Terminal ATFM delay	ETOT	CTOT	ID of the flow restriction generating the ATFM delay	Airport or terminal airspace volume associated with the flow restriction	Delay code associated with the flow restriction			ATFM
	KPI 13	Taxi in additional time	ALDT	AIBT						Airports (airport operations), airlines (OOOI data), ADS-B data providers and/or ANSPs
	KPI 16	Additional fuel burn	Indicator values to be converted to estimated additional fuel burn: KPI02 Taxi-Out Additional Time (min/flight) KPI13 Taxi-In Additional Time (min/flight) KPI05 Actual en-Route Extension (%) & average en-route distance flown (km/flight) KPI08 Additional time in terminal airspace (min/flight) KPI17 Level-off during climb KPI18 Level capping during cruise & average cruise (ToC-ToD) distance flown (km/flight) KPI19 Level-off during descent							Performance analysts
	KPI18	Level capping during cruise	For each flight trajectory: Maximum cruise Flight Level	Departure airport	Arrival airport					For variant 1: ANSPs; For variant 2: Trajectory data providers (reporting archived actual trajectories based on ADS-B and/or other surveillance data sources) and/or ANSPs