



**Nineteenth Meeting of the CAR/SAM Regional Planning and Implementation Group
 (GREPECAS/19)**

Online, 27 – 29 October 2021

Agenda Item 3: GREPECAS Work Programmes, Objectives and Results
3.2 GREPECAS Work Programmes, Objectives and Results

DASHBOARD FOR THE GREPECAS

(Presented by the Secretariat)

EXECUTIVE SUMMARY	
This Working Paper presents the progress and a prototype of a CAR/SAM Regional Dashboard to report, monitor and follow up on the implementation of air navigation elements and to support the Annual CAR/SAM Regional Air Navigation Report.	
Action:	Actions are described in Section 4.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none"> • Air Navigation Capacity and Efficiency • Economic Development of Air Transport
<i>References:</i>	<ul style="list-style-type: none"> • Doc 9883 — <i>Manual on Global Performance of the Air Navigation System.</i>

1. Introduction

1.1 During the ICAO Assembly Fortieth Session (A40) held in 2019, the Ver 6 of the Global Air Navigation Plan (GANP) (Doc 9750) was approved, in addition to a new concept in implementation called “Basic Building Blocks (BBB). Together with the *Global Aviation Safety Plan* (Doc 10004 - GASP), they allow for a coherent planning of activities in terms of air navigation and safety in line with the specific needs of each region, emphasizing the cooperative, collaborative association and coordinated by its main actors.

1.2 The regional planning, development and maintenance of regional air navigation plans (ANP) is carried out by the ICAO regional planning and implementation groups with the assistance of the Regional Offices. The regional plans are derived from the GANP, based on the operational needs of the States. The tactical adjustments to the work programmes are carried out continuously and with the support of the ICAO standard online tools. Collaborative data analysis and results will be carried out, which will be available through the Regional Dashboard and the Annual Air Navigation Report, as analyzed in the following paragraphs, will help to determine the necessary tactical adjustments

1.3 GREPECAS, responding to the mandate of the ICAO Council to apply a performance-based approach to the planning and implementation of Air Navigation, has always reported the status of the implementation of air navigation within a common report for all Regional Offices, which is provided to the ICAO Council through the Air Navigation Commission (ANC).

2. Discussion

2.1 To optimize reporting and tracking, GREPECAS is proposing a measurement and reporting mechanism, based on regional performance indicators and targets. The States recognize the importance of the compilation, data analysis and its storage, for the later presentation of reports and a more opportune follow-up of the levels of implementation and the achievements achieved, based on the data for the allocation of data with the States, Air Navigation Service Providers (ANSP) and the International Organizations in order to obtain information and data on the status of implementation of the infrastructure/Air Navigation Services, among others.

2.2 For the measurement/reporting mechanism, the establishment of metrics/targets, procedures and reports are required. If GREPECAS is progressively identifying a set of regional performance indicators and support metrics, the States have recognized that a measurement mechanism that includes data collection, processing, storage and the generation of reports on regional performance metrics identified are fundamental for the success of the performance-based approach.

2.2 The measurement mechanism will allow the correlation of real implementation status and expectations (implementation goals). In order to support this ongoing task of collecting, measuring and reporting data, GREPECAS distributed this task to the new Data Analysis Working Group (DAWG). The GREPECAS website will allow you to visualize the implementation status through dynamic and interactive graphics. This system will generate Ad hoc reports and will allow a transformation of the dataset in the regional Dashboard and the Annual Global Air Navigation Report.

2.3 In addition, agreements will be established in order to obtain information related to the implementation status of the Air Navigation infrastructure. This information will assist in the development of the Regional Performance Panel and the Annual Air Navigation Report. To achieve the objectives regarding the establishment of the Dashboard, it is necessary that the following factors be taken into account:

1. The need for the measurement mechanism, with common measurement parameters, common goals and a common language (English and Spanish).
2. 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.
3. Identify those responsible for providing, evaluating and feeding the dashboards, so that their information is always updated, according to the established levels.

2.4 In this sense, to define this measurement and reporting mechanism, the DAWG will make use of the established number of indicators for each navigation area and will work to propose the necessary procedures for this task.

2.5 The Dashboard consists of developing an online platform within the GREPECAS website, using the Power BI tool for this purpose and in coordination with the States and stakeholders of the region to agree on which indicators/metrics will be the most relevance to be visualized and measured on the Dashboard. The initial indicators proposed are the following:

For this meeting, a presentation of the initial GREPECAS prototype will be given for analysis and approval of the meeting. An example report of this dashboard is shown in **Appendix** to this WP, including some proposed initial indicators..

2.6 The Dashboard, in addition to containing the most relevant indicators, metrics and CAR/SAM Regional goals in corresponding to the ANS areas according to the GANP, will have a detailed level by State or unit of measurement of the metric.

2.7 It has been estimated that each member of GREPECAS will be able to have access to the control panel according to the official designation of their State or International organization. Access will be restricted to only GREPECAS members. The Administrator of these accesses will be the Secretariat of GREPECAS. The detailed procedure of the same will be developed by the DAWG.

2.8 Following up on this initial prototype and based on the comments received by GREPECAS, it is estimated that the dashboard will be completed with real data for the next GREPECAS Plenary meeting in 2022.

3. Conclusion

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

3.2 Establishing measurement mechanisms would provide the necessary information for continuous improvement, remembering that 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, so that the regional working groups also adopt them and in this way the information of the regional indicators can be fed.

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

4. Required Actions

4.1 The Meeting is invited to:

- a) in response to the presentation of the initial prototype of the GREPECAS Dashboard, approve or comment on this initial prototype with its metrics and indicators;
- b) urge States and International Organizations to provide the necessary information to feed the dashboard when developing the final version of the prototype;
- c) take note of the tasks and work of the DAWG to complete this dashboard, its procedures and other aspects for its operation; and
- d) support any other action that due to this work is required of States, International Organizations and other Stakeholders.

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

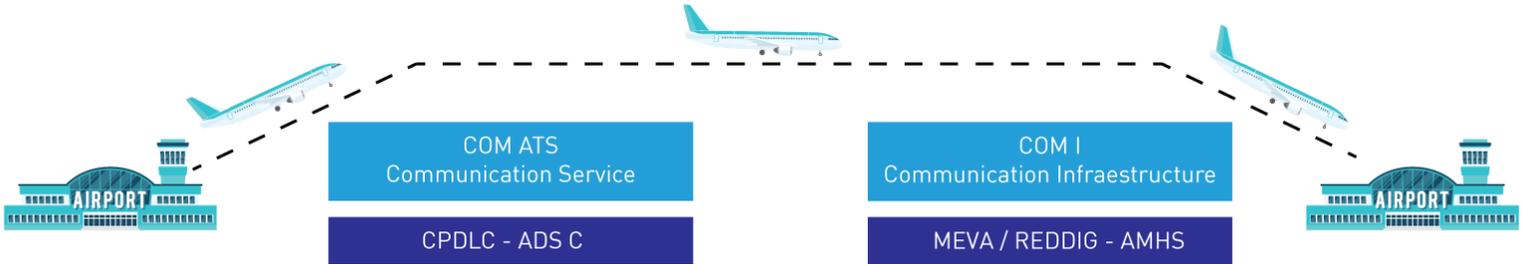
AIDC

DAIM - Digital Aeronautical Information Manual

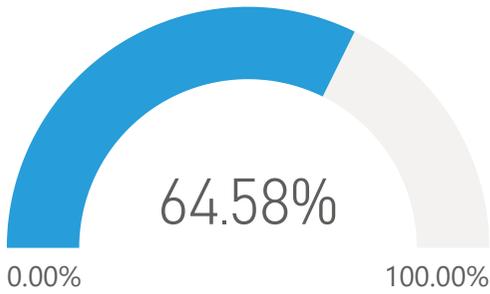
AMET - Meteorological Information

AIM QMS - e AIP - eTOD

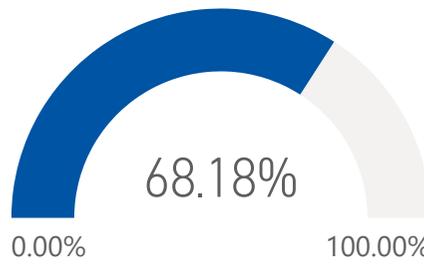
MET QMS - IWXXM - OPMET



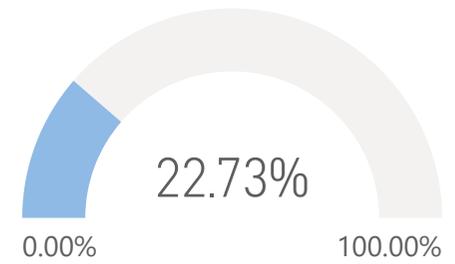
% of AIDC Implementation - CAR Region



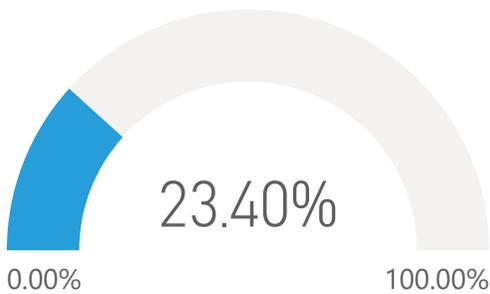
% of QMS AIM Certification and Implementation - CAR Region



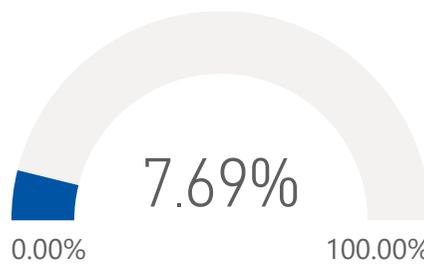
% e-AIP Progress (Partial Operation) - CAR Region



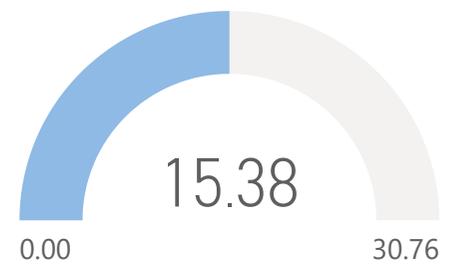
% of AIDC Implementation - SAM Region



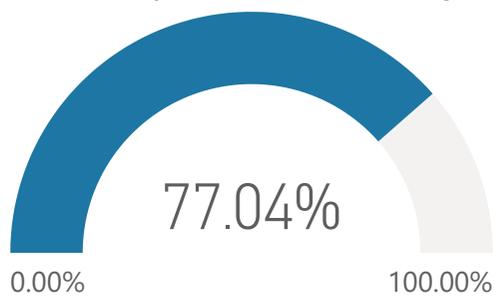
% of QMS AIM Certification and Implementation - SAM Region



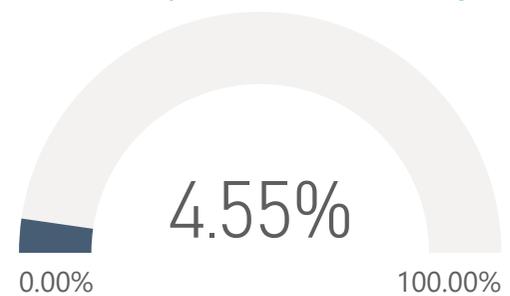
% e-AIP Progress (Partial Operation) - SAM Region



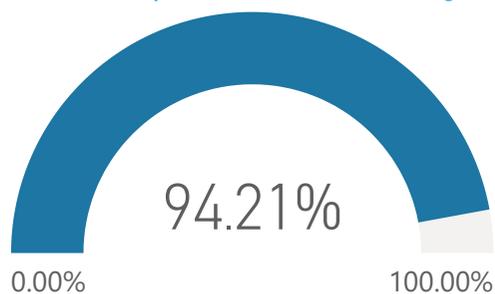
% AMHS implementation - CAR Region



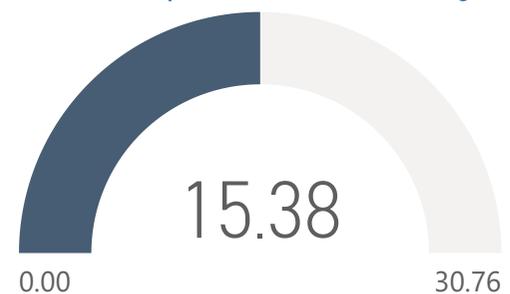
% IWXXM implementation - CAR Region



% AMHS implementation - SAM Region



% IWXXM implementation - SAM Region



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

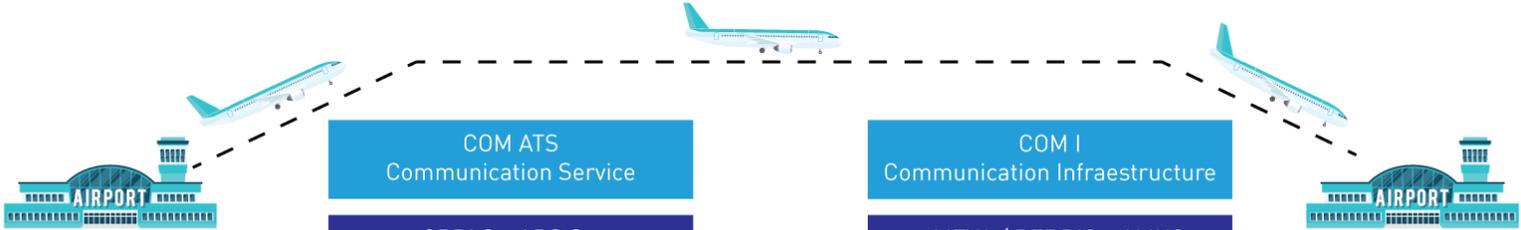
AIDC

DAIM - Digital Aeronautical Information Manual

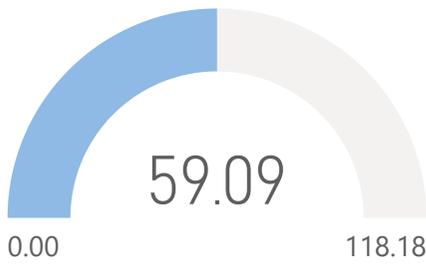
AMET - Meteorological Information

AIM QMS - e AIP - eTOD

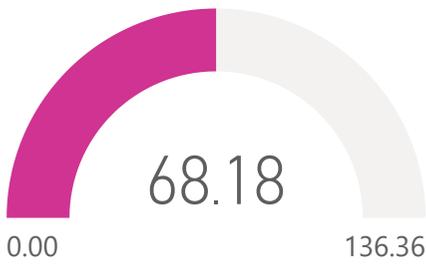
MET QMS - IWXMM - OPMET



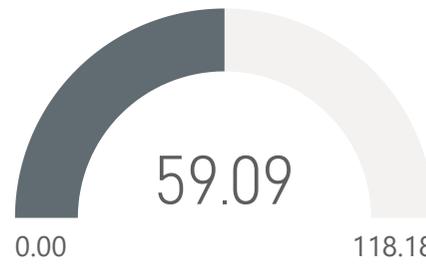
% eTOD Implementation - Area 2A - CAR Region



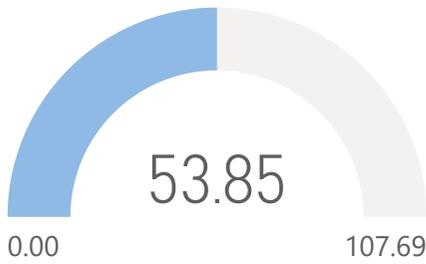
% eTOD Implementation - >1.2% trajectory - CAR Region



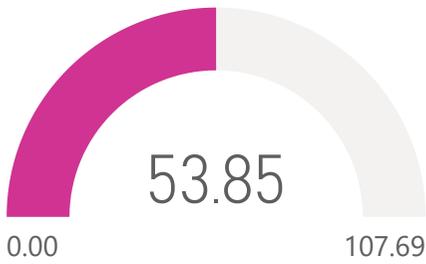
% eTOD Implementation - OLS Penetration - CAR Region



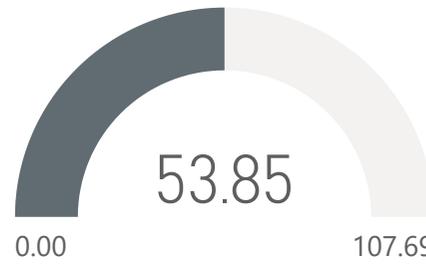
% eTOD Implementation - Area 2A - SAM Region



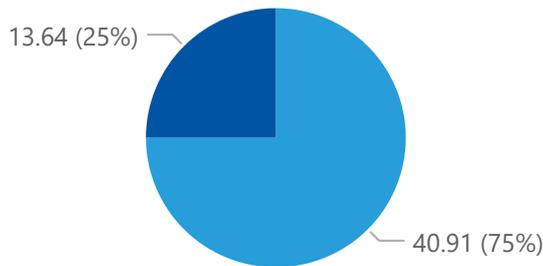
% eTOD Implementation - >1.2% trajectory - SAM Region



% eTOD Implementation - OLS Penetration - SAM Region

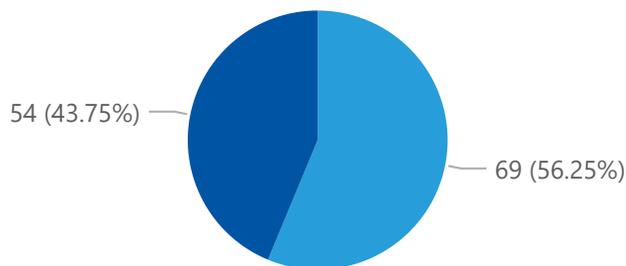


% QMS MET certification and implementation - CAR Region

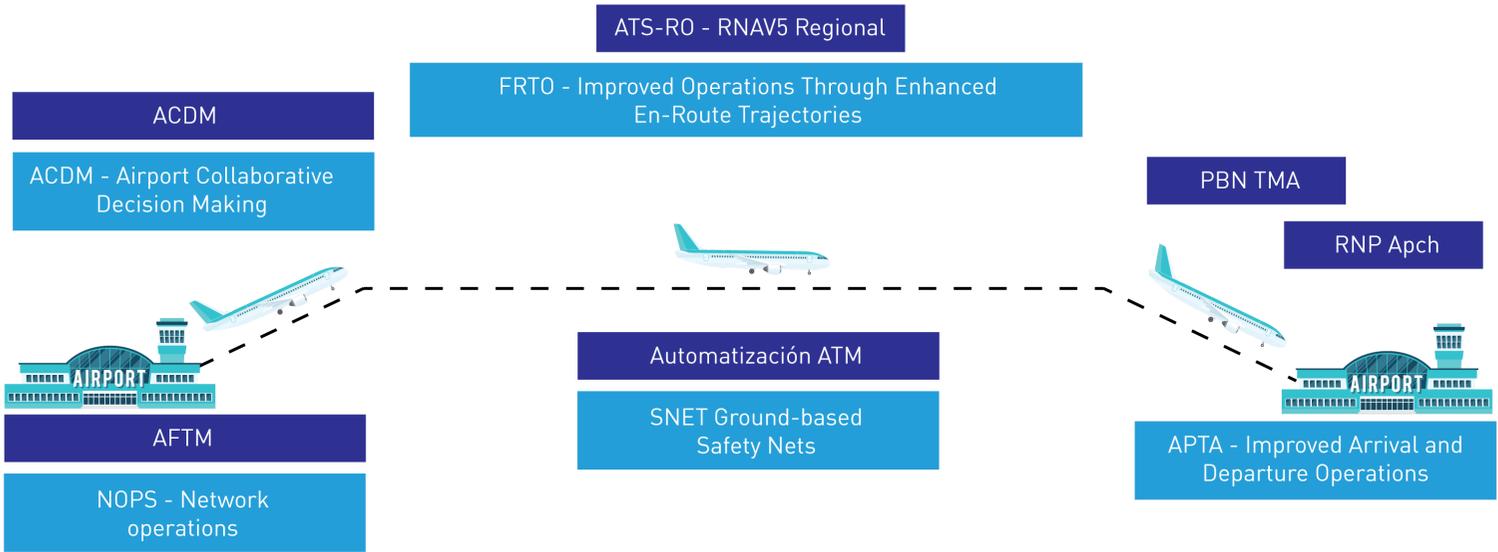


- Regional Implementation - CAR
- Regional Certification - CAR

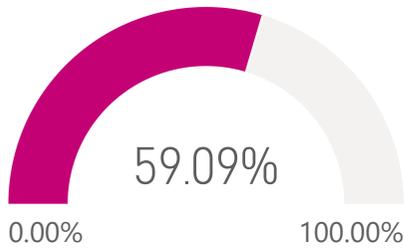
% QMS MET certification and implementation - SAM Region



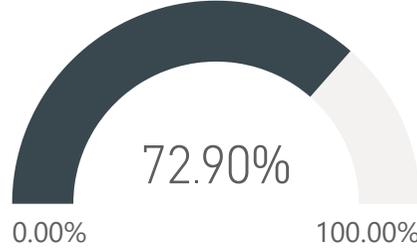
- Regional Implementation - SAM
- Regional Certification - SAM



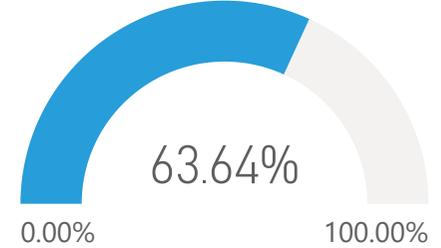
% of International Aerodromes that have implemented airport operations enhancement through A-CDM (Applicable = High Density) - CAR Region



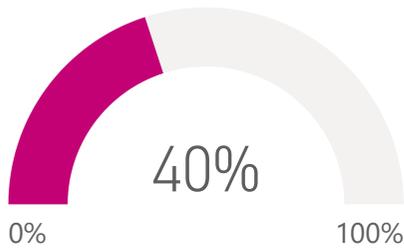
% of implemented APCH RNP (APV Minimums) on IFR RWY - CAR Region



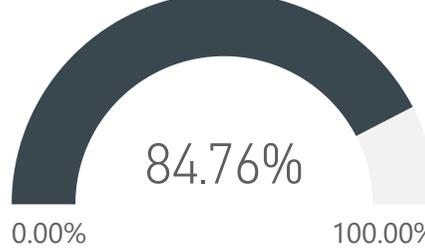
% of implemented AFTM dependencies (FMP/FMU) - CAR Region



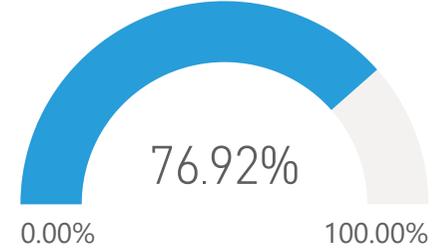
% of International Aerodromes that have implemented airport operations enhancement through A-CDM (Applicable = High Density) - SAM Region



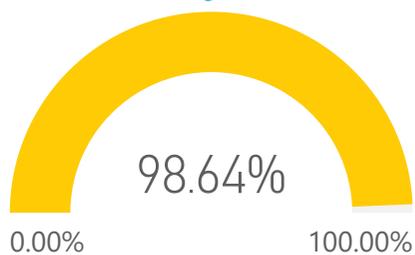
% of implemented APCH RNP (APV Minimums) on IFR RWY - SAM Region



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



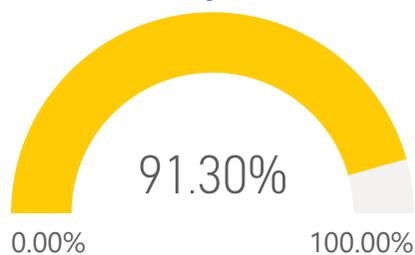
% STAR PBN Routes for IFR RWY - CAR Region



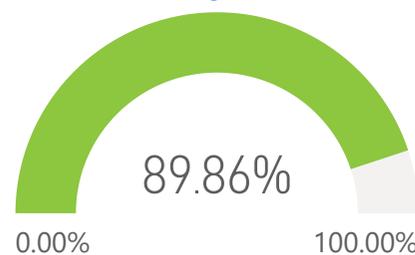
% SID PBN Routes for IFR RWY - CAR Region



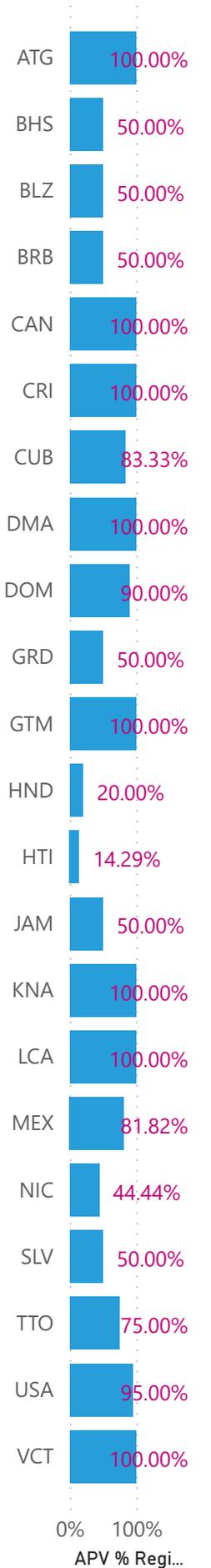
% STAR PBN Routes for IFR RWY - SAM Region



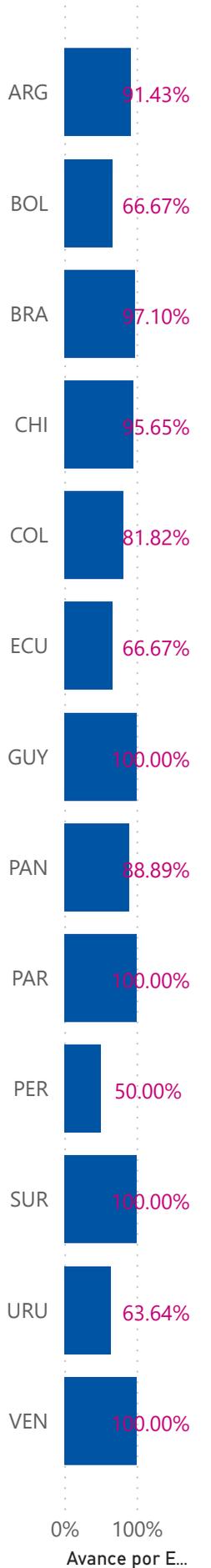
% SID PBN Routes for IFR RWY - SAM Region



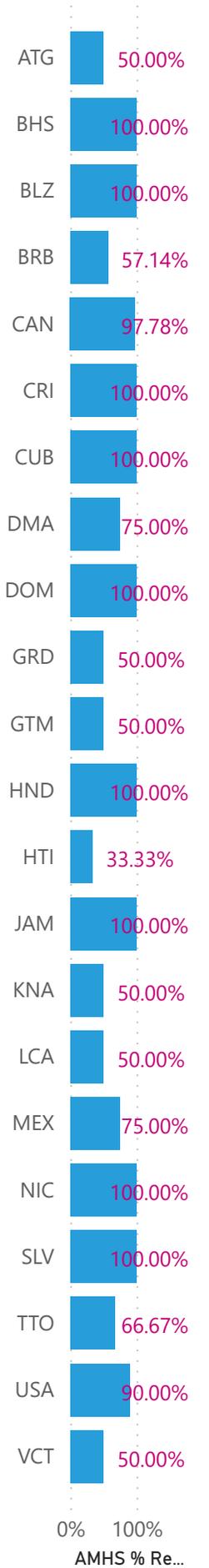
APV % Regional Implementation by State - CAR Region



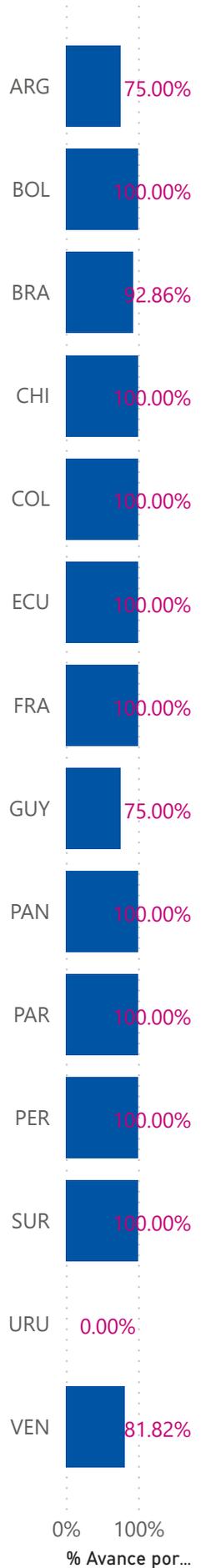
APV % Regional Implementation by State - SAM Region



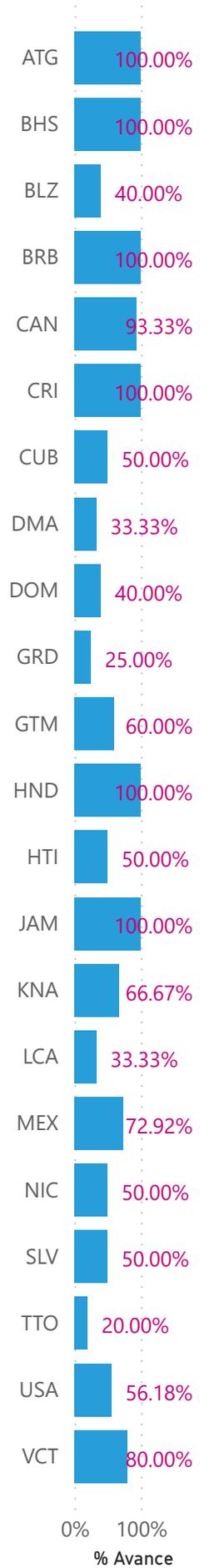
AMHS % Regional Implementation by State - CAR Region



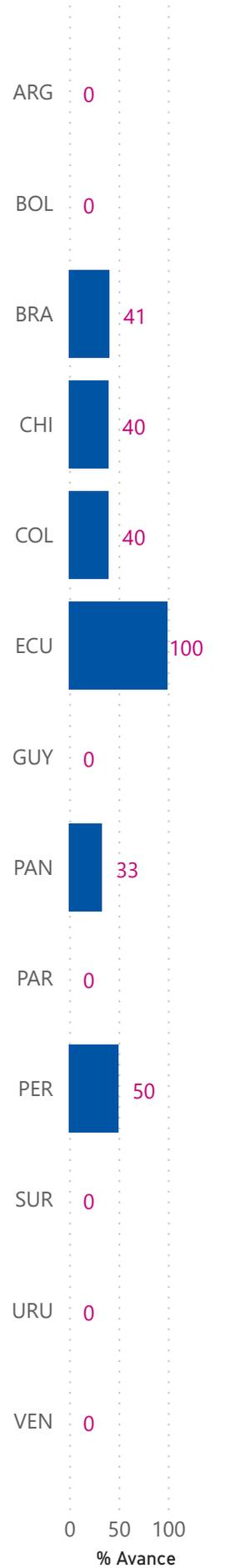
AMHS % Regional Implementation by State - SAM Region



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	14

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	22

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	22

ACDM Regional Implementation by State - SAM Region

State	Implemented
ARG	
BRA	
CHI	
COL	
PAN	
PER	
Total	120.00%