**Flight Simulator Training Ad-hoc Group**

**Terms of Reference**

**Background:**

The LATAM/CAR region has seen over the past decade a growing number of airlines and flight operations, and thus, a growth in the installment of different flight training equipment, for pilot training.

Many new technologies have emerged in flight training equipment, from Advanced Aviation Training Devices (AATDs) to Full Flight Simulators (FFS). Advancements in technology have enabled pilots to perform maneuvers in different Flight Training Devices (FTD) that were only possible on a level D FFS in the past. However, the regulatory framework in the region regarding the certification and acceptance of flight simulators for pilot training is in many cases, non-existing or obsolete, presenting a challenge to operators and professional training centers to use this equipment properly and efficiently, for training.

Recognizing the need to update regulations according to the latest technologies in flight training equipment and to optimize pilot training, the following conclusion was agreed during the ICAO NACC DC/10 Meeting in French Antilles:

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| **CONCLUSION** | | |  | | | |
| **NACC/DCA/10/9** | | | **HARMONIZED APPROVAL GUIDANCE FOR SIMULATOR/TRAINING DEVICES** | | | |
| **What:** | | | | | | **Expected impact:** |
|  | That, considering the benefits that flight simulations and the recent training technology for aviation is offering to States and the aviation industry for pilot training and States inspector, while keeping the necessary safety assurance of these type of Training; States and ICAO:   1. analyse the common needs and requirements that flight simulators can offer in expediting pilot and aviation training by the NACC/DCA/11; 2. develop a guidance document on a harmonized approach on amending national regulations and procedures to make use of the flight simulation as a valid tool/ media for this training by the NACC/DCA/11; and 3. make use of good practices and lessons learned of similar deployment for its adoption in the CAR Region to include it as part of the guidance by NACC/DCA/11. | | | | | ☐ Political / Global  ☐ Inter-regional  ☒ Economic  ☐ Environmental  ☒ Operational/Technical |
| **Why:** | | | | | | |
|  | Reduce costs and resources on pilot and CAA staff training with the use of Flight Simulations and the Training Technology for Aviation | | | | | |
| **When:** | | NACC/DCA/11 | | **Status:** | ☒ Valid / ☐ Superseded / ☐ Completed | |
| **Who:** | | ☒ States ☒ ICAO ☒ Other: | | United States, Central American States (COCESNA) and ICAO | | |

The project consists of two phases.

Phase one consists of having a guidance document developed to be approved by the NACC/DCA/11 meeting.

Phase two: Implementation. To teach the States how to implement the guidance document and to develop/amend their regulations/procedures. The implementation will be monitored by the ICAO NACC SAP programme/USOAP PQ’s.

**Objectives and deliverables:**

1. Become an advisory group to the LATAM/CAR region, under the leadership of ICAO, in matters related to Aircrew Training, to guarantee that the region is always up to date in matters related to Aircrew training, and that regulations are updated accordingly, providing guidance to civil aviation authorities in the definition of such regulations
2. Analyse the common needs and requirements that flight simulators can offer in expediting pilot and aviation training
3. Develop model regulations and guidance material for the States to adopt.

Phase 1 Project deliverables:

1. Develop a guidance document on a harmonized approach on amending national regulations and procedures to make use of the flight simulation as a valid tool/ media for this training.
2. To identify and present good practices and lessons learned of similar deployment for its adoption in the LATAM/CAR Region to include it as part of the guidance.

**Phase 2 Project Deliverables:**

1. The execution of workshops with airlines and civil aviation authorities about the use of the guidance material and the newest technologies in flight simulation training devices;
2. Establishment of an advisory group (could be an evolution of the current Group), to facilitate future information to civil aviation authorities and airlines about new regulations, training programs and technologies related to pilot training.
3. The process to ensure that the guidance material and regulations will be aligned with the ICAO Doc 9625.

**Potential risks:**

* Lack of knowledge from civil aviation authorities about new pilot training programs and training equipment technologies
* Lack of knowledge from civil aviation authorities about ICAO SARPs, and their regulations in relation to pilot training
* Impossibility of States to amend the regulations in a timely manner;
* Regional Safety Oversight Organizations that are not aware of regulatory changes to amend the regulations in a timely manner;
* The lack of knowledge by CAA’s to certify Flight Simulation Training Devices (FSTDs).

**Risk mitigation:**

* Conducting of workshops/trainings;
  + Make states aware of the ICAO model regulations (best practices) andguidance are ICAO compliant.
* Development of the procedures to align the regulations with the ICAO Doc. 9625;
* Seek support of the regional directors on the update of the regulations;
* ICAO NACC/SAM follow-up with the States in order to expedite the updating of the amended regulations.

**Methodology:**

Virtual meetings to be conducted every two weeks, as the guidelines get created and tasks to be appointed to the different members as the group sees fit

**References:**

ICAO Doc 9625 Volume I, FAA CFR Part 60, EASA CS-FSTDA(A) regulations for the qualification and acceptance of FTDs, Latin American Regulations (LARS); and the Central American Regulations (RACS-FSTD).

**Team Members:**

ICAO NACC region representative: Sereya Schotborgh (Lead) and Marcelo Orellana

ICAO SAM region representative: Marcelo Ureña

FAA representative: Trent Bigler

EASA representative: To be determined.

COCESNA: Nickole Barquero and Frazier Rodriguez

ALTA: Ana Persiani and Virginio Corrieri de Castro

FSTD manufacturers: Redbird, CAE, L3Harris, MPS, TRU Simulation and Training

**Governance and Reporting:**

This Ad-hoc Group to report to the NACC DCA Director Generals.

**Action Plan First Phase:**

* + - * October 2022 – Finalization of the TORs
      * November 2022:
  1. Analyse/Compare the regulations;
  2. Define best framework.
* December 2022:
  1. Identify the best practices in the region;
  2. Preliminary work on the guidance material for the Civil Aviation Authorities.
* January 2023:

1. Review of preliminary work of the guidance material.

* February 2023:

1. Conclusion of review process;
2. Discussion and agreement on last guideline document for the Authorities.

* March 2023:
  1. Presentation of the process for the alignment of regulations with ICAO Document 9625.
  2. Presentation of deliverables to NACC RO for its presentation to NACC/DCA/11 Meeting for eventual release of Guidance material to the Civil Aviation Authorities in the region by NACC and SAM ROs.

**Next steps:**

* + - * Initiate the analysis and comparison of the regulations.

**Phase two:**

* To conduct workshops with operators and Authorities, to have the same understanding about the basis of the guideline material and advancements in the worldwide regulatory framework.
* To conduct workshops about the different technologies in discussion, to educate about the latest trends and use of flight training equipment.