



**WORKING PAPER**

**ASSEMBLY — 40TH SESSION**

**EXECUTIVE COMMITTEE**

**Agenda Item 25: ICAO Civil Aviation Training Policy and Capacity Building in Aviation**

**ICAO CIVIL AVIATION TRAINING AND CAPACITY-BUILDING**

(Presented by the Council of ICAO)

**EXECUTIVE SUMMARY**

This Assembly working paper provides a summary of activities and achievements of the ICAO *Civil Aviation Training* since the 39th Session of the Assembly. It also provides information on the implementation of the ICAO *Civil Aviation Training Policy*; the activities of the Aviation Security Training Centres (ASTCs) Network, as well as professional training and higher education activities contributing to the Next Generation of Aviation Professionals (NGAP) Programme.

**Action:** The Assembly is invited to:

- a) encourage Member States to support ICAO in the pursuit of new training partnerships across all regions;
- b) endorse the development of alternative training modalities to facilitate access, such as distance learning, and promote these new modalities to their civil aviation stakeholders;
- c) recommend Member States to benefit from the ICAO TRAINAIR PLUS Programme and support the expansion of the network of Members in order to develop, share and deliver training programmes to enhance the qualification of aviation professionals; and
- d) encourage the Council to actively engage in promoting ICAO training activities to Member States in order to increase outreach across all regions.

<i>Strategic Objectives:</i>	This working paper relates to all Strategic Objectives and Supporting Implementation Strategies.
<i>Financial implications:</i>	The activities referred to in the attached Assembly working paper will be undertaken subject to the resources available in the 2019–2021 Regular Programme Budget and under the GAT cost-recovery mechanism.
<i>References:</i>	ICAO <i>Civil Aviation Training Policy</i> , dated 25 May 2016 <i>TRAINAIR PLUS Operations Manual</i> (TPOM) (Doc 10052)

## 1. INTRODUCTION

1.1 The paper reports on training activities implemented during the triennium 2017-2019 including, inter alia, achievements of the TRAINAIR PLUS Programme (TPP), the Aviation Security Training Centres (ASTC) Network, and higher education activities that contribute to the mission of ICAO's Next Generation of Aviation Professionals (NGAP) Programme.

1.2 The Air Transport Bureau (ATB) collaborates with the Global Aviation Training Office (GAT) to recognize new ASTCs according to specific criteria established by GAT and ATB, and to harmonize strategic and operational aspects regarding the management of the Aviation Security Training Programme.

1.3 Training activities and educational programmes developed by GAT contribute to the mission of the ICAO NGAP Programme in educating and developing aviation personnel with the adaptability and flexibility to maintain safe, secure and efficient operations in a rapidly changing air transportation system.

## 2. ACHIEVEMENTS OF THE GLOBAL AVIATION TRAINING PROGRAMME

### 2.1 TRAINAIR PLUS Programme (TPP) Activities

2.1.1 Since 2016, GAT has conducted over 90 assessments, initial and reassessments, of training organizations to first validate their acceptance as TPP Members, and then to maintain the validity of their membership. Currently an average of 30 training organizations is assessed each year to analyse and determine the capability of TPP Members to develop and deliver Standard Training Packages (STPs). GAT monitors the Regional Training Centres of Excellence's (RTCEs) adherence to set criteria through continuous monitoring, such as the conduct of two assessments a year.

2.1.2 The implementation of competency-based training courses supports human resources capacity-building of Member States in all ICAO Strategic Objectives. ICAO Bureaus and Regional Offices, TPP Members, the industry, and academic institutions have been working with GAT to develop courses or have existing ones reviewed and recognized by ICAO. Since 2016, 21 ICAO Training Packages (ITPs), 5 of which by RTCEs, and 3 Compliant Training Packages (CTPs) were developed. Since 2016, 84 STPs have been developed by TPP Members in the following categories: Security and Facilitation (6), Environment (1), Air Transport (3), Flight Safety and Safety Management (17), Air Navigation Services (26), and Aerodromes (31). There are currently 2 ITPs, 14 RTCE ITPs, and 42 STPs under development.

2.1.3 As of 15 March 2019, TPP is implementing training activities in 73 ICAO Member States, and the TPP network is composed of 104 Members, 8 of which joined in 2018. The network includes 20 RTCEs, 45 Full Members, 33 Associate Members, and 6 Corporate Members.

2.1.4 There are currently thirty-five members of the ASTC Network operating in all seven ICAO regions, with five new ICAO-endorsed ASTCs having joined the Network in the triennium 2017-2019. Of the thirty-five current members, fourteen are also members of the TPP Network.

2.1.5 The ICAO Course Catalogue is composed of over 200 courses. Since 2016, 962 ICAO-recognized courses have been delivered globally with an estimated total of 11 400 trainees in attendance, and a total of 159 instructors, 21 Instructional Systems Design (ISD) validators, and 10 assessors have also been qualified. The current ICAO online training portfolio comprises 13 courses in the fields of:

Performance Based Navigation (PBN), Air Transport, Flight Safety and Safety Management, Aerodromes, and Training Competency Development. Around 1 800 trainees have completed ICAO online trainings. In order to support TPP Members in efficiently planning and executing respective online training programmes, GAT has prepared Guidelines for the Development of Online Courses. The guidelines provide guidance on standards and best practices for the development of online training.

2.1.6 In 2018, the automated training evaluation process through the TRAINAIR PLUS Electronic Management System (TPEMS) was launched for the course delivery evaluation of all ITPs. Participant lists, grades, evaluation questionnaires, and instructors' remarks are integrated in the process. This automation greatly reduces the workload of instructors for course delivery, and enhances the validity and reliability of training evaluation. Also, all ITPs are gradually undergoing an effectiveness analysis following the implementation of the Post-training Evaluation (PTE) methodology.

2.1.7 Aviation security training is managed by the Implementation Support and Development Section (Security) (ISD-SEC) in ATB. ISD-SEC manages the delivery of six aviation security training courses and seven aviation security workshops. In order to provide aviation security training to all Member States under the auspices of the *No Country Left behind* (NCLB) initiative, ISD-SEC manages the ICAO ASTC Network. In 2017 and 2018 combined, a total of 69 ICAO-sponsored aviation security courses and workshops were conducted through the ASTC Network, with 1 019 aviation security specialists from 128 Member States benefitting from the training. Each ICAO-sponsored aviation security training activity cost an average of 6 500 CAD. Additionally, Facilitation and Traveller Identification Programme (TRIP) training is provided by ATB in collaboration with GAT.

2.1.8 In the framework of assistance to States in the implementation of Standards and Recommended Practices (SARPs), GAT has established a scholarship allocation procedure for ITPs. Scholarships cover course tuition fees, and are provided to eligible trainees originating from States which in the context of capacity-building efforts within the NCLB initiative are endeavouring to either meet or maintain their Effective Implementation (EI) rates. 8 Scholarships were provided in 2018.

2.1.9 GAT will introduce a new cost structure of ICAO courses in order to apply a differentiation of course fees for trainees originating from civil aviation Regulatory bodies, versus those which originate from non-Regulatory Bodies, while considering a cost-recovery mechanism as well as scholarships allocation.

2.1.10 In 2018, ICAO formalized an agreement with the Government of China, through its South-South Cooperation Assistance Fund Project, to develop and deliver a Civil Aviation Authority Senior and Middle Managers Training Course (CAA SMMTC). A total of 597 applicants from over 100 States and 5 regional safety oversight organizations (RSOOs) have been awarded the scholarships through 25 sessions in 2018 and 2019. The course aims to enhance the skills of senior and middle management of CAAs, in order to effectively manage the implementation of ICAO SARPs related to the areas of safety, air navigation, security and facilitation.

2.1.11 ICAO collaborated with Singapore Aviation Academy to develop and deliver the Directors General of Civil Aviation Programme on Aviation Security, which enriches awareness and understanding of the international civil aviation security framework and its compliance requirements. The inaugural session was hosted in Montréal with 19 executives from 15 States in attendance. The Secretariat supported the work and outcomes of the Aviation Security Panel of Experts' (AVSECP) Working Group on Training (WGT). This includes the promotion of security culture among Member States, efforts to professionalize aviation security personnel, and the development of aviation security training outlines; all in an effort to effectively implement the Global Aviation Security Plan (GASeP).

## 2.2 **Partnerships with academic institutions and international organizations**

2.2.1 Since 2016, ICAO has established partnerships with 6 higher education institutions and international organisations, including: Concordia University's John Molson School of Business (JMSB) to establish a Management Certificate in Civil Aviation; Airports Council International (ACI) for the delivery of Airport Management Professional Accreditation Programme (AMPAP), and other airport related training; École Nationale de l'Aviation Civile (ENAC) of France to establish a Master's Programme in Aviation Safety Management; the University of Waterloo, to develop and deliver a "Fundamentals of the Air Transport System" e-learning course; Nanyang Technological University of Singapore for the delivery of ICAO's Aviation Data-driven Decision-Making (AD3M) course; and finally and the European Organisation for the Safety of Air Navigation (EUROCONTROL) on the development and delivery of a "Managing Security in ATM" Course. In the coming years additional partnership agreements are expected to be signed with Universities and academic institutions.

## 2.3 **Global and regional training events**

2.3.1 Training events are organized by GAT and hosted by TPP Members, which aim to reinforce the implementation of the ICAO competency-based training methodology, and create a platform for exchange of knowledge and best practices. A total of 6 global and regional training events have been organized since 2016 in 3 ICAO Regions, and namely in the Republic of Korea, Ethiopia and Qatar, bringing together over 2000 aviation training stakeholders. In addition four ICAO Course Developers and Instructors Standardization (CDI/STD) meetings were organized in Kenya and Colombia, Tunisia, and India. In total, 364 participants from 87 States attended the meetings to exchange their knowledge and skills, share best practices, discuss challenges, and identify opportunities for the improvement of training deliverables.

## 3. **ICAO TRAINING ACTIVITIES FOR THE TRIENNIUM 2020-2022**

3.1 TPP membership is expected to reach around 126 by 2022. Consequently, GAT is expected to conduct an average of 36 assessments yearly, which includes reassessments and new assessments. Procedures and requirements of TPP are published in the newly published fourth edition of the *TRAINAIR PLUS Operations Manual (TPOM)* (Doc 10052). It is also expected that 18 new partnerships with academic institutions and international organizations be established by the end of 2022.

3.2 An annual average of 30 new STPs and 5 new ITPs are expected to be developed and available to TPP Members and the industry. Approximately 4 800 trainees yearly are expected to successfully complete ICAO training classroom and online courses in the triennium. In the next triennium additional online training will be developed in Environment, Aeronautical Information Management, Safety Management, Unmanned Aircraft Systems and Cargo Safety, among others.

3.3 With respect to capacity-building of instructional teams (instructors, course developers, validators, evaluators and training managers), more than 100 instructional qualification courses are expected to be delivered by the end of 2022. The main ICAO instructional qualification courses are: Validating Competency-based Training, Training Developers Course, training instructor course, Managing Aviation Training Intelligence, Training Manager Course, and PTE Training.

3.4 During the next triennium GAT will focus on assisting States and TPP Members in implementing aviation training intelligence practices, methodologies and tools such as the Training Needs Analysis (TNA) and the Instructional System Design (ISD) web-based applications, to support data-driven training decisions. This support will be anchored into essential components that will integrate in

existing network system architecture. The management of Aviation Training Intelligence (ATI) works as a cycle where safety, security and air transport data collected are transformed into aviation training data and used for training needs analysis. GAT will continue to build and implement these components and train training centre managers to optimize ATI for their organizations. To better support the evolution of online courses ICAO a robust Learning Management System (LMS) will be implemented to host and manage online course development and deployment. The development of online training programmes on the new LMS will help ICAO reach a wider target audience by engaging trainees who have limited access to classroom training.

3.5 Under the Working Arrangements between the GAT and ATB for the Harmonization of the ICAO Aviation Security Training Programme, the coordination of the ASTC Network will remain under the purview of ISD-SEC. However, any new applicants to the ASTC Network must first join the TPP Network. ISD-SEC will conduct AVSEC-specific assessments following a training centre's recognition as a TPP Member. In addition, the Secretariat recognizes the need to continue updating existing training to align with the current iteration of Annex 17 – Security, the security related SARPs of Annex 9 – Facilitation, and the ICAO Aviation Security Manual (Doc 8973 – Restricted), and to develop new aviation security and facilitation training that addresses gaps in the current portfolio as well as new and emerging threats. Going forward, the Secretariat will continue to provide at least one ICAO-sponsored training event annually at each of the ASTCs.

#### 4. CONCLUSION

4.1 The next triennium will see an increase in the implementation of aviation training intelligence practices, methodologies and tools, to assist States and TPP Members in the optimization of aviation training solutions. Concurrently, GAT will also focus its efforts in the further implementation of the TNA and post-training performance evaluation in order to assist Members in making informed training management decisions, improving training plans, and developing competency-based programmes for short- and long-term performance needs.

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APPENDIX

GAT ACTUAL FINANCIAL INFORMATION 2016-2018

		2016	2017	2018
		(Actual)	(Actual)	(Actual)
<b>Revenues*</b>	TPP Annual Membership Fee (ring-fenced)	1,830,000	1,900,000	1,825,000
	Course Deliveries (include retainer contract field expert costs)	2,760,000	2,500,000	3,520,000
	Assessment of Training centres	140,000	369,000	400,000
	<b>Total Revenue</b>	4,730,000	4,769,000	5,745,000
<b>Expenses*</b>	Staff costs	1,597,000	2,141,000	2,339,000
	Consultancy costs (include retainer contract field expert costs)	350,000	376,000	811,000
	Non staff costs (refers to costs related to travel, outsourcing, equipment, stationary, promotion, bank charges, IT software, maintenance, and enhancement of the TRAINAIR PLUS Electronic Management System (TPeMS) and other online systems, surveys, etc.)	1,301,000	1,318,000	1,912,000
	<b>Total Expenses</b>	3,248,000	3,835,000	5,062,000
<b>Balance*</b>		<b>1,478,000</b>	<b>934,000</b>	<b>684,000</b>

\*All amounts are in CAD.

**GAT BUDGETED FINANCIAL INFORMATION 2019-2022**

		<b>2019 (Budgeted)</b>	<b>2020 (Budgeted)</b>	<b>2021 (Budgeted)</b>	<b>2022 (Budgeted)</b>
<b>Revenues*</b>	TPP Annual Membership Fee (ring-fenced)	2,087,000	2,158,487	2,158,487	2,274,426
	Course Deliveries	3,000,000	3,641,046	3,997,312	4,515,058
	Assessment of Training centres	620,000	516,150	516,150	516,150
	<b>Total Revenue</b>	<b>5,707,000</b>	<b>6,315,683</b>	<b>6,671,949</b>	<b>7,305,634</b>
<b>Expenses*</b>	Staff costs	2,997,358	3,159,950	3,259,120	3710042
	Consultancy costs (include retainer contract field expert costs)	933,638	1,127,092	1127092	1207092
	Non staff costs (refers to costs related to travel, outsourcing, equipment, stationary, promotion, bank charges, IT software, maintenance, and enhancement of the TRAINAIR PLUS Electronic Management System (TPeMS) and other online systems, surveys, etc.)	1,253,011	1,365,868	1491346	1498073
	<b>Total Expenses</b>	<b>5,184,007</b>	<b>5,652,910</b>	<b>5,877,558</b>	<b>6,415,210</b>
<b>Balance*</b>		<b>522,994</b>	<b>662,773</b>	<b>794,391</b>	<b>890,424</b>

\*All amounts are in CAD.