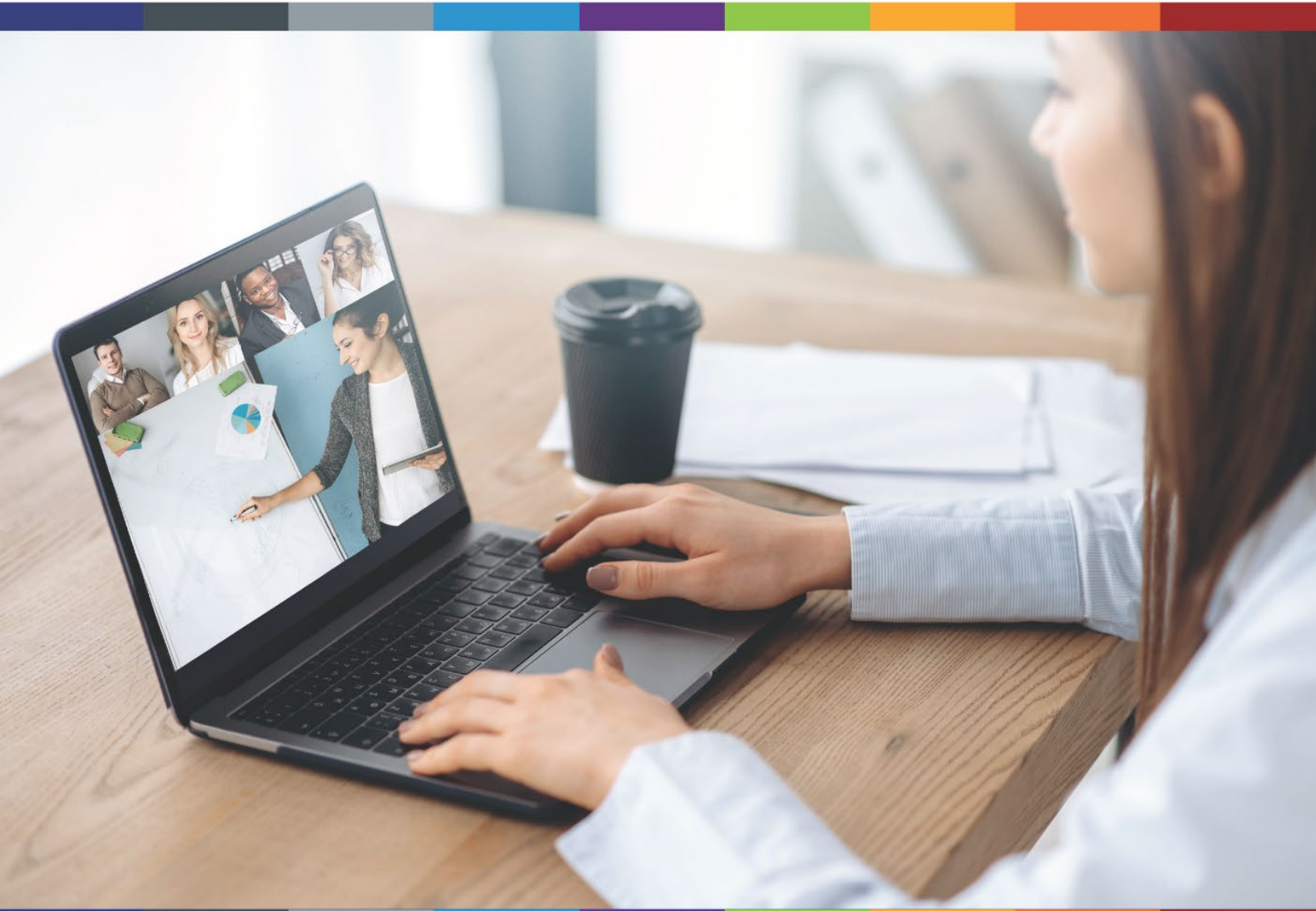




ICAO

GLOBAL AVIATION TRAINING
TRAINAIR PLUS™



— APPENDIX B —

TRAINING EVALUATION REPORT 2020

APPENDIX B

Training Evaluation Report: 2020

1. Overview

GAT has implemented the Kirkpatrick Training Evaluation Model, which identifies three specific levels of training evaluation, to objectively analyse the impact of training effectiveness. The integration of this evaluation model into TPEMS has permitted the automation of the evaluation processes, allowing the collection of valuable data in each training delivery at the following three levels:

- **Level 1 – Reaction:** questionnaires sent to trainees at the end of each module/training session measure the trainees' reactions to the delivered training by giving their opinion related to course structure and test; training activities; training material; and training environment.
- **Level 2 – Learning:** competency tests implemented during each training delivery measure the degree to which trainees acquired the intended competencies.
- **Level 3 – Behaviour:** questionnaires sent to trainees and their supervisors three months after the completion of a training course measure the impact of training on job performance. It is also referred to as Post-Training Evaluation (PTE).

Taking into account the quantitative and qualitative feedback through training evaluation, ICAO-recognized training courses are required to be reviewed at least once every three years, to ensure continuous validity and course quality.

The three levels of evaluation were applied to a total of **175** ICAO training courses delivered in 2020, consisting of **45** face-to-face classroom, **130** virtual classroom and **21** online courses. The average results are:

- Level 1 – Reaction: **90.10 %** satisfaction;
- Level 2 – Learning: **89.82 %** the set competencies acquired;
- Level 3 - Behaviour: **4.17** (equivalent to **83.4%**) performance improvements in the workplace.



2. Summary of Level 1 and 2 Evaluation in 2020

Evaluation of face-to-face classroom and virtual classroom courses **by ICAO Regions:**

Level	Unit	Average	ICAO Regions							Course Type	
			APAC	NACC	WACAF	EUR/NAT	MID	ESAF	SAM	Face to Face	Virtual
Level 1: Reaction	%	90.10	87.93	89.94	89.82	92.23	88.50	88.50	94.64	89.75	90.20
Level 2: Learning	%	89.82	90.38	89.07	87.51	89.69	87.95	89.54	94.42	87.62	90.41

Evaluation of instructors teaching in face-to-face classroom and virtual classroom **by ICAO regions:**

Category	Unit	ICAO Regions							Face to Face	Virtual
		APAC	NACC	WACAF	EUR/NAT	MID	ESAF	SAM		
Instructor Evaluation	%	93.72	94.55	94.56	97.01	94.32	94.49	96.26	94.96	94.78

Evaluation of face-to-face classroom and virtual classroom courses **by ICAO Training Category:**

Level	Unit	ICAO Training Category								
		Aerodromes	Air Navigation Services	Air Transport	Aviation Law	Aviation Management	Environment	Flight Safety and Safety Management	Security and Facilitation	Training Competency Development
Level 1: Reaction	%	-	-	-	90.80	85.03	89.32	87.72	81.40	91.95
Level 2: Learning	%	-	-	-	93.54	90.23	83.73	89.86	90.21	89.58

Evaluation of instructors teaching in face-to-face classroom and virtual classroom **by ICAO Training Category:**

Level	Unit	ICAO Training Category								
		Aerodromes	Air Navigation Services	Air Transport	Aviation Law	Aviation Management	Environment	Flight Safety and Safety Management	Security and Facilitation	Training Competency Development
Instructor Evaluation	%	-	-	-	94.93	90.15	91.97	93.56	91.15	96.08

3. Summary of Level 3 Post-Training Evaluation in 2020

Level 3 Post-Training Evaluation methodology measures the impact of training courses developed under the guidelines set out in the Training Development Guide, Competency-based Methodology (Doc 9941). The model uses a Weighed Impact Index (WIN Index), which generates a quantitative value that measures the impact of training on the trainees' work performance. It is derived from responses submitted by trainees and their supervisors, collected using an evaluation tool that supports PTE methodology processes.

The ICAO TRAINAIR PLUS programme has defined the UNNACCEPTABLE and ACCEPTABLE impact ranges for the WIN Index, applicable to all courses.

		IMPACT RANGES				
		UNNACCEPTABLE IMPACT RANGE		ACCEPTABLE IMPACT RANGE		
		Very Low impact values	Low impact values	Minimum acceptable impact values	High impact values	Optimal impact values
Win Index		0 – 2.49	2.5 – 2.99	3.0 – 3.49	3.5 – 3.99	4.0 – 5.0
%		0% - 49.8%	50% - 59.8%	60% - 69.8%	70% - 79.8%	80% - 100%

Evaluation of face-to-face classroom and virtual classroom courses by **ICAO Regions**:

Level	Unit	ICAO Regions							Face to Face	Virtual
		APAC	NACC	WACAF	EUR/NAT	MID	ESAF	SAM		
Level 3: Post Training Evaluation	WIN	4.16	4.07	3.99	4.38	4.17	4.36	4.37	4.32	4.74
	%	83.2	81.4	79.8	87.6	83.4	87.2	87.4	86.4	94.8
		Optimal Impact	Optimal Impact	High impact	Optimal Impact	Optimal Impact	Optimal Impact	Optimal Impact	Optimal Impact	Optimal Impact

Evaluation of face-to-face classroom and virtual classroom courses by **ICAO Training Category**:

Level	Unit	ICAO Training Category								
		Aero-dromes	Air Navigation Services	Air Transport	Aviation Law	Aviation Management	Environment	Flight Safety and Safety Management	Security and Facilitation	Training Competency Development
Level 3: Post Training Evaluation	WIN	-	-	-	4.00	3.99	3.65	4.16	3.65	4.23
	%	-	-	-	80	79.8	73.0	83.2	73.0	84.6
		-	-	-	Optimal Impact	High Impact	High Impact	Optimal Impact	High Impact	Optimal Impact

4. Evaluation Results of ICAO Training Packages (ITPs) in 2020

4.1 Level 1 – Trainees’ reaction and Instructor’s performance

Blended ITPs

Course Title	Language	Training Area	No. of deliveries	Evaluation Level 1 (%)	Instructor’s Performance (%)
Aviation Data-driven Decision Making (AD3M)	EN	FSM	2	90.1	96
Safety Management for Practitioners (SMxP)	EN	FSM	2	90.5	95.1
Training Instructors Course (TIC) Part 2	EN	TCD	9	91	94.3

Face-to-face Classroom ITPs

Course Title	Language	Training Area	No. of deliveries	Evaluation Level 1 (%)	Instructor’s Performance (%)
CORSIA Verification	EN	ENV	1	96.8	98.8
ECCAIRS - European Co-ordination Centre for Accident and Incident Reporting Systems (ECCAIRS) End User	EN	FSM	1	89.8	95.4
ECCAIRS - European Co-ordination Centre for Accident and Incident Reporting Systems (ECCAIRS) Technical	EN	FSM	1	92.2	98.8
ICAO Government Safety Inspector – Personnel Licensing (GSI-PEL-18710)	EN	FSM	4	83.4	93.8
ICAO Government Safety Inspector Operations – Air Operator Certification (GSI-OPS-18700)	EN	FSM	3	89.4	94.0
Training Developers Course (TDC)	EN	TCD	5	91.3	95.8
International Air Law Course	EN	LAW	1	91.2	97.8
Dangerous Goods – Using the Technical Instructions for the Safe Transport of Dangerous Goods by Air	EN	FSM	2	87.1	87.2
ICAO Government Safety Inspector Airworthiness – Air Operator and Approved Maintenance Organization Certification (GSI-AIR-18701)	EN	FSM	1	90.0	90.6
Curso de preparadores de instrucción (TDC SP)	SP	TCD	1	96.8	96.8
Curso de Formación de Instructores (CFI)	SP	TCD	1	93.2	98.6
State Safety Programme (SSP)	EN	FSM	1	85.7	90.4
Cours de formation instructeurs	FR	TCD	1	98.6	99.8
Formation de concepteur de cours (TDC FR)	FR	TCD	1	96.4	99.0
ICAO Annex 9 - Facilitation	EN	FAL	1	84.0	91.2
Validating Competency-based Training (VCT)	EN	TCD	1	89.5	95.6

Virtual Classroom ITPs

Course Title	Language	Training Area	No. of deliveries	Evaluation Level 1 (%)	Instructor's Performance (%)
COVID-19 Aviation Safety Risk Management for CAAs: Virtual Classroom	EN	FSM	11	86.6	90.8
Derecho Aeronáutico Internacional: Impartición Virtual	SP	LAW	6	95.3	98.2
Gestión del cumplimiento de los SARPS de la OACI (MCIS): Impartición Virtual	SP	MGT	2	91.6	94.2
Managing Compliance with ICAO SARPs (MCIS): Virtual Classroom	EN	MGT	4	81.0	86.5
Aviation Data-driven Decision Making (AD3M): Virtual Classroom	EN	FSM	4	87.8	96.4
Training Developers Course (TDC): Virtual Classroom	EN	TCD	7	90.9	97.2
Post-Training Evaluation (PTE): Virtual Classroom	EN	TCD	5	87.9	93.4
Gestion de la conformité aux SARPs de l'OACI (MCIS): Classe Virtuelle	SP	MGT	1	88.0	96.6
International Air Law: Virtual Classroom	EN	LAW	7	86.9	91.7
Training Managers Course (TMC): Virtual Classroom	EN	TCD	5	85.2	93.6
Especialista en Evaluacion Post-Instruccion: Impartición Virtual	SP	TCD	2	96.1	96.9
Curso de preparadores de instrucción (TDC SP): Impartición virtual	SP	TCD	3	95.1	94.9
Curso de Gerentes de Centros de Instrucción (CGCI): Impartición Virtual	SP	TCD	1	93.8	88.0
Air Cargo Safety Management: Virtual Classroom	EN	FSM	1	84.8	90.6
CORSIA Verification: Virtual Classroom	EN	ENV	5	87.8	90.6
ICAO Annex 9 - Facilitation: Virtual Classroom	EN	FAL	3	87.2	91.1
ICAO Government Safety Inspector Operations – Air Cargo Certification (GSI-AC-18702) Virtual Classroom	EN	FSM	1	87.4	98.0
Instrucción en el aula virtual: Impartición Virtual	SP	TCD	4	95.4	97.1
Safety Management for Practitioners (SMxP): Virtual Classroom	EN	FSM	10	89.4	94.8
Safety Risk Management Fundamentals: Virtual Classroom	EN	FSM	3	87.6	94.9
Validating Competency-based Training (VCT): Virtual Classroom	EN	TCD	1	95.4	100
Virtual Classroom Instruction (VCI): Virtual Classroom	EN	TCD	40	92.4	96.7
Курс для разработчиков учебных курсов (TDC RU): Виртуальный Класс	RU	TCD	1	89.8	98.2

4.2 Level 2 – Learning

Online ITPs

Course Title	Language	Training Area	Evaluation Level 2 (%)
Aerodrome Restart: Online	EN	AGA	93.0
Aviation Data-driven Decision Making (AD3M) - Part 1: Online	EN	FSM	86.0
Digital Transformation in Aviation: Online	EN	MGT	82.0
Gestión de la Seguridad Operacional: en línea	ES	FSM	84.0
Performance-Based Navigation (PBN) Airspace Design: Online	EN	ANS	86.0
Performance-Based Navigation (PBN) for Air Traffic Controllers: Online	EN	ANS	92.0
Performance-Based Navigation (PBN) for Pilots: Online	EN	ANS	88.0
Performance-Based Navigation (PBN) Operations Approval: Online	EN	ANS	66.0
Performance-Based Navigation (PBN) Overview: Online	EN	ANS	78.0
Public Health Corridor: Online	EN	FSM	84.0
Repurposing Aircraft Passenger Cabin for Transport of Cargo: Online	EN	FSM	84.0
Safety Management: Online	EN	FSM	88.0
Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA) Phase 1: Online	EN	FSM	89.0
Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA) Phase 2 AGA: Online	EN	FSM	88.0
Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA) Phase 2 AIG: Online	EN	FSM	86.0
Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA) Phase 2 AIR: Online	EN	FSM	84.0
Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA) Phase 2 ANS: Online	EN	FSM	86.0
Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA) Phase 2 LEG & ORG: Online	EN	FSM	90.0
Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA) Phase 2 OPS: Online	EN	FSM	88.0
Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA) Phase 2 PEL: Online	EN	FSM	86.0
Unmanned Aviation Fundamentals: Online	EN	ANS	87.0

Blended ITPs

Course Title	Language	Training Area	No. of deliveries	Evaluation Level 2 (%)
Aviation Data-driven Decision Making (AD3M)	EN	FSM	2	92.5
Safety Management for Practitioners (SMxP)	EN	FSM	2	93.9
Training Instructors Course (TIC) Part 2	EN	TCD	9	87.4

Face-to-face Classroom ITPs

Course Title	Language	Training Area	No. of deliveries	Evaluation Level 2 (%)
CORSIA Verification	EN	ENV	1	80.1
ECCAIRS - European Co-ordination Centre for Accident and Incident Reporting Systems (ECCAIRS) End User	EN	FSM	1	84.5
ECCAIRS - European Co-ordination Centre for Accident and Incident Reporting Systems (ECCAIRS) Technical	EN	FSM	1	87.6
ICAO Government Safety Inspector – Personnel Licensing (GSI-PEL-18710)	EN	FSM	4	89.5
ICAO Government Safety Inspector Operations – Air Operator Certification (GSI-OPS-18700)	EN	FSM	3	89.1
Training Developers Course (TDC)	EN	TCD	5	91.3
International Air Law Course	EN	LAW	1	87.1
Dangerous Goods – Using the Technical Instructions for the Safe Transport of Dangerous Goods by Air	EN	FSM	2	85.3
ICAO Government Safety Inspector Airworthiness – Air Operator and Approved Maintenance Organization Certification (GSI-AIR-18701)	EN	FSM	1	81.5
Curso de preparadores de instrucción (TDC SP)	SP	TCD	1	96.4
Curso de Formación de Instructores (CFI)	SP	TCD	1	95.7
State Safety Programme (SSP)	EN	FSM	1	85.9
Cours de formation instructeurs	FR	TCD	1	86.9
Formation de concepteur de cours (TDC FR)	FR	TCD	1	92.6
ICAO Annex 9 - Facilitation	EN	FAL	1	93.2
Validating Competency-based Training (VCT)	EN	TCD	1	58.8

Virtual Classroom ITPs

Course Title	Language	Training Area	No. of deliveries	Evaluation Level 2 (%)
COVID-19 Aviation Safety Risk Management for CAAs: Virtual Classroom	EN	FSM	11	89.8
Derecho Aeronáutico Internacional: Impartición Virtual	SP	LAW	6	96.3
Gestión del cumplimiento de los SARPS de la OACI (MCIS): Impartición Virtual	SP	MGT	2	92.4
Managing Compliance with ICAO SARPs (MCIS): Virtual Classroom	EN	MGT	4	89.5
Aviation Data-driven Decision Making (AD3M): Virtual Classroom	EN	FSM	4	93.0
Training Developers Course (TDC): Virtual Classroom	EN	TCD	7	93.3
Post-Training Evaluation (PTE): Virtual Classroom	EN	TCD	5	92.7
Gestion de la conformité aux SARPs de l'OACI (MCIS): Classe Virtuelle	SP	MGT	1	88.9
International Air Law: Virtual Classroom	EN	LAW	7	92.1
Training Managers Course (TMC): Virtual Classroom	EN	TCD	5	89.9
Especialista en Evaluacion Post-Instruccion: Impartición Virtual	SP	TCD	2	92.6
Curso de preparadores de instrucción (TDC SP): Impartición virtual	SP	TCD	3	94.0
Curso de Gerentes de Centros de Instrucción (CGCI): Impartición Virtual	SP	TCD	1	88.2
Air Cargo Safety Management: Virtual Classroom	EN	FSM	1	95.6
CORSIA Verification: Virtual Classroom	EN	ENV	5	84.5
ICAO Annex 9 - Facilitation: Virtual Classroom	EN	FAL	3	89.2
ICAO Government Safety Inspector Operations – Air Cargo Certification (GSI-AC-18702) Virtual Classroom	EN	FSM	1	81.7
Instrucción en el aula virtual: Impartición Virtual	SP	TCD	4	87.3
Safety Management for Practitioners (SMxP): Virtual Classroom	EN	FSM	10	91.7
Safety Risk Management Fundamentals: Virtual Classroom	EN	FSM	3	90.2
Validating Competency-based Training (VCT): Virtual Classroom	EN	TCD	1	78.8
Virtual Classroom Instruction (VCI): Virtual Classroom	EN	TCD	40	89.4
Курс для разработчиков учебных курсов (TDC RU): Виртуальный Класс	RU	TCD	1	94.7

4.3 Level 3 – Behaviour

PTE Implementation Data

- Total number of ITP deliveries in which PTE methodology is implemented: **108 deliveries**
- Total number of trainees responded: **1713 Trainees**
- Total number of supervisors responded: **477 Supervisors**

Blended ITPs

Course Title	Language	Training Area	No. of deliveries	WIN Index	Impact Value %	Impact Range
Aviation Data-driven Decision Making (AD3M)	EN	FSM	2	4.080	81.6	Optimal Impact
Safety Management for Practitioners (SMxP)	EN	FSM	2	4.241	84.82	Optimal Impact
Training Instructors Course (TIC) Part 2	EN	TCD	9	4.129	82.6	Optimal Impact

Face-to-face Classroom ITPs

Course Title	Language	Training Area	No. of deliveries	WIN Index	Impact Value %	Impact Range
ECCAIRS - European Co-ordination Centre for Accident and Incident Reporting Systems (ECCAIRS) End User	EN	FSM	1	3.72	74.4	High Impact
ECCAIRS - European Co-ordination Centre for Accident and Incident Reporting Systems (ECCAIRS) Technical	EN	FSM	1	4.01	80.2	Optimal Impact
ICAO Government Safety Inspector – Personnel Licensing (GSI-PEL-18710)	EN	FSM	4	4.32	86.4	Optimal Impact
ICAO Government Safety Inspector Operations – Air Operator Certification (GSI-OPS-18700)	EN	FSM	3	4.23	84.6	Optimal Impact
Training Developers Course (TDC)	EN	TCD	5	4.14	82.8	Optimal Impact
International Air Law Course	EN	LAW	1	4.03	80.6	Optimal Impact
Dangerous Goods – Using the Technical Instructions for the Safe Transport of Dangerous Goods by Air	EN	FSM	2	4.36	87.2	Optimal Impact
ICAO Government Safety Inspector Airworthiness – Air Operator and Approved Maintenance	EN	FSM	1	3.85	77.0	High Impact

Organization Certification (GSI-AIR-18701)						
Curso de preparadores de instrucción (TDC SP)	SP	TCD	1	4.88	97.6	Optimal Impact
Curso de Formación de Instructores (CFI)	SP	TCD	1	4.03	80.6	Optimal Impact
State Safety Programme (SSP)	EN	FSM	1	4.13	82.6	Optimal Impact

Virtual Classroom ITPs

Course Title	Language	Training Area	No. of deliveries	WIN Index	Impact Value %	Impact Range
COVID-19 Aviation Safety Risk Management for CAAs: Virtual Classroom	EN	FSM	11	4.07	81.4	Optimal Impact
Derecho Aeronáutico Internacional: Impartición Virtual	SP	LAW	6	3.92	78.4	High Impact
Gestión del cumplimiento de los SARPs de la OACI (MCIS): Impartición Virtual	SP	MGT	1	4.18	83.6	Optimal Impact
Managing Compliance with ICAO SARPs (MCIS): Virtual Classroom	EN	MGT	4	3.95	79.0	High Impact
Aviation Data-driven Decision Making (AD3M): Virtual Classroom	EN	FSM	4	4.12	82.4	Optimal Impact
Training Developers Course (TDC): Virtual Classroom	EN	TCD	7	4.08	81.6	Optimal Impact
Safety Management for Practitioners (SMxP): Virtual Classroom	EN	FSM	10	4.33	86.6	Optimal Impact
Post-Training Evaluation (PTE): Virtual Classroom	EN	TCD	5	4.17	83.4	Optimal Impact
Gestion de la conformité aux SARPs de l'OACI (MCIS): Classe Virtuelle	SP	MGT	1	4.27	85.4	Optimal Impact
International Air Law: Virtual Classroom	EN	LAW	7	3.96	79.2	High Impact
Training Managers Course (TMC): Virtual Classroom	EN	TCD	5	4.51	90.2	Optimal Impact
Especialista en Evaluación Post-Instrucción: Impartición Virtual	SP	TCD	2	3.73	74.6	High Impact
Curso de preparadores de instrucción (TDC SP): Impartición virtual	SP	TCD	3	4.23	84.6	Optimal Impact
Curso de Gerentes de Centros de Instrucción (CGCI): Impartición Virtual	SP	TCD	1	4.19	83.8	Optimal Impact

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