Guidance for Managing Pilot Training and Licensing During COVID-19 Operations

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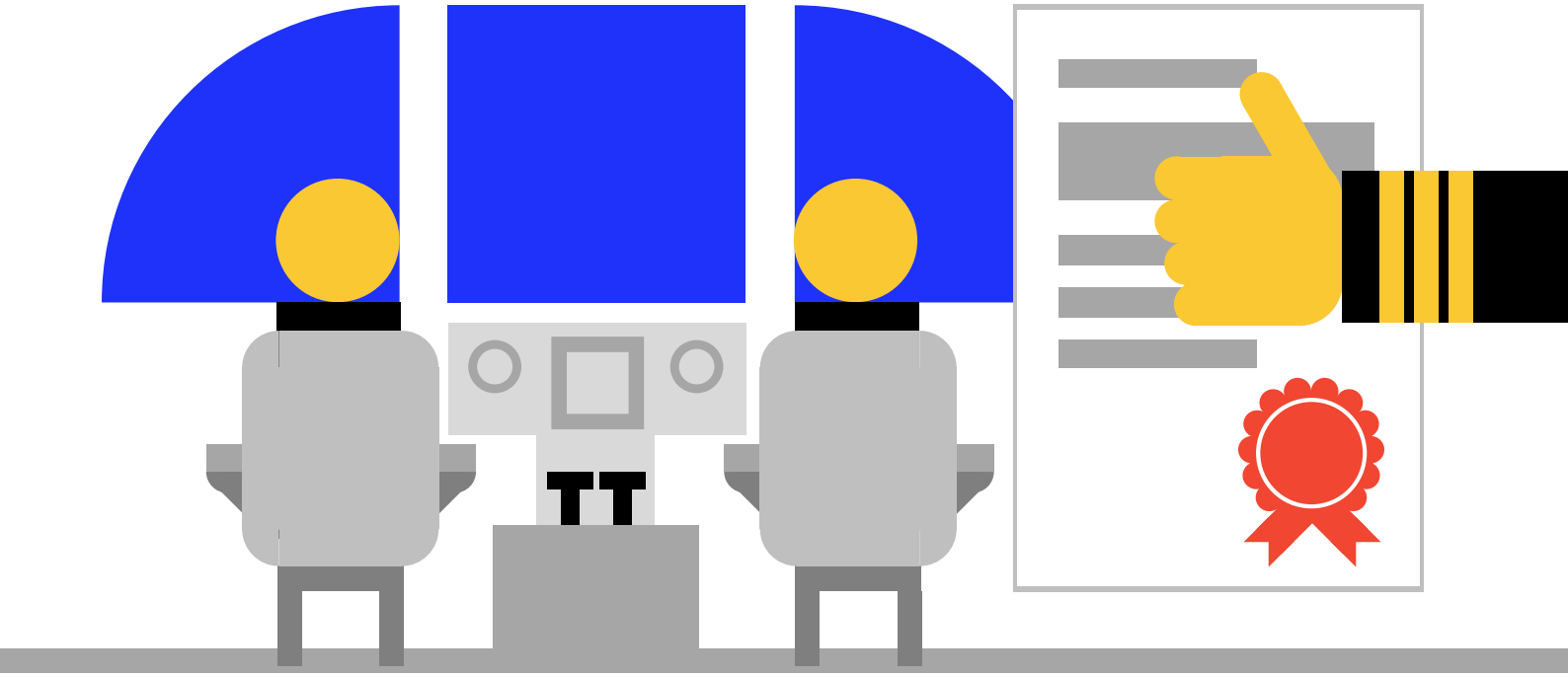

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Contents

1. Introduction, scope and objective **2**
2. General recommendations and safety risk assessment **3**
2.1 General recommendations 3
2.2 Safety Risk Assessment 4
2.2.1 Flight Crew Member Training Programs 4
2.2.2 Proficiency Check 7
2.2.3 Recent experience 10
2.2.4 Area, route and aerodrome qualification 13
3. Practical applications **17**
3.1 White paper: Ensuring the quality of training when classroom instruction is delivered via virtual classroom 17
3.2 Request to conduct Line Check in a simulated environment 17
3.3 Alternative means of compliance to a specific national pilot recency requirement 25
4. Best practices **28**
4.1 Sanitization procedures 28
Annex 1 Examples from flight training organizations 31
4.2 White Paper: Refresher Competency-Based Training and Assessment (CBTA) and Evidence-Based Training (EBT) Session for "Post COVID" Operational Recovery, Edition 2 34
4.3 White Paper: ATO-AOC Partnership Including Instructor Provisioning 34

1. Introduction, scope and objective

In the context of the COVID crisis, operators and training organizations are facing difficulties to comply with their national regulatory requirements related to flight crew license and qualification validity because both flight and training operations are significantly disturbed.

National Aviation Authorities are globally supporting the approval, for a limited period, of alternative solutions to the traditional licensing and operational requirements. This is possible for operators and training organizations that have implemented suitable special conditions of operations monitored by their respective Safety Management Systems.

The value of these alternative solutions is clearly to maintain operations when the training capacity is limited, or when the administrative licensing revalidation process is disturbed.

The first aim of this document is to support operators and training organizations manage the risk assessment associated with the regulatory alleviations and to provide best practices for the operational special conditions mitigating the identified risks. The second aim is to propose medium- and long-term solutions for the operational recovery and for the enhancement of the training effectiveness.

As the national regulatory requirements are drafted based on ICAO standards and recommended practices published in Annex 1 and Annex 6 of the Convention on International Civil Aviation, this document provides global mitigation measures to ICAO standard deviations. Moreover, this IATA guidance for managing the Pilot Training and Licensing during COVID 19 complies with the high level recommendations established by the ICAO Council Aviation Recovery Task Force (CART), and in particular with the Take-off: Guidance for Air Travel through the COVID-19 Public Health Crisis.

When examples are based on national or regional regulations, the reference to the requirement is mentioned.

The organization's Safety Management System is responsible to adapt and validate the adequacy of the mitigation measures proposed in this guidance to the operator's or training organization's context of operations.

Note: This guidance will be updated as required as further information becomes available.

In this document, an organization means an operator, or a training organization and the following acronyms are used:

- AOC: Operator holding an Air Operator Certificate
- ATO: Approved Training Organization
- NAA: National Aviation Authority

2. General recommendations and safety risk assessment

2.1 General recommendations

It is of the utmost importance for organizations to be able to assess the level of experience and competence of their pilot population before applying to individuals the license or training validity extensions granted by the NAA.

In this document, the assumption is that the organization requests license and qualification validity extensions for the pilots being holders of a valid license and medical certificate, being up to date for both licensing and operator training and checking requirements and having demonstrated consistently the operator performance standards.

The following templates are provided as general guidance to organizations to support their own safety risks assessment.

The templates remain at a macroscopic level on purpose as it is not possible to provide a detailed risk analysis suitable for each organization without knowing the nature, the magnitude and the associated operational context of the alleviation requested by the AOC or the ATO.

This is why the risks columns in the template are rated intolerable for any event and acceptable after mitigation. Each AOC and ATO needs to evaluate the probability and the severity of the event to rate the risk with accuracy.

2.2 Safety Risk Assessment

2.2.1 Flight Crew Member Training Programs

Flight Crew Member Training Programs ICAO Annex 6 Part I 9.3.1

The operator shall establish and maintain a ground and flight training program, approved by the State of the Operator, which ensures that all flight crew members are adequately trained to perform their assigned duties.

The training program shall:

a) include ground and flight training facilities and properly qualified instructors as determined by the State of the Operator;

b) consist of ground and flight training in the type(s) of aeroplane on which the flight crew member serves;

c) include proper flight crew coordination and training in all types of emergency and abnormal situations or procedures caused by engine, airframe or systems malfunctions, fire or other abnormalities;

d) include upset prevention and recovery training;

e) include training in knowledge and skills related to visual and instrument flight procedures for the intended area of operation, charting, human performance including threat and error management and in the transport of dangerous goods;

f) ensure that all flight crew members know the functions for which they are responsible and the relation of these functions to the functions of other crew members, particularly in regard to abnormal or emergency procedures; and

g) be given on a recurrent basis, as determined by the State of the Operator and shall include an assessment of competence.

No.	Event	Hazard	Consequence *(worst case scenario)*	Existing Controls	Risk			Mitigation Action	Ownership	New Controls	Risk		
					Probability	Severity	Rating				Probability	Severity	Rating
	An inability to perform the required recurrent training to meet the National legislation regarding the Flight Crew Training Program elements of the Standard, due to restrictions as a result of the COVID-19 pandemic	Pilots are not trained and assessed across all the elements of the approved recurrent training program resulting in a decrease of pilot minimal acceptable competency standards	Pilots experience difficulties in performing their duties adequately in normal and abnormal situations	Applies to pilots engaged in commercial operations with an operator License must be valid with the appropriate current type/instrument rating Only for current approved training programs			Intolerable	Reductions in operating limitations (x-wind, contaminated runways, etc., restrict new destinations) Reduction in scope of activities such as CAT III, RNP AR etc. Increased training delivered by alternative means e.g., Threat and Error Management training appropriate to the revised operations, SEP changes, crew guidance material and SOP's. These should be kept under constant review. Crew composition e.g., Line trainers to be paired with pilots with least experienced/lower performing pilots Consider applicability of the		Applies to pilots who already have flying experience on the type (not new on the type) Applies to pilots who have demonstrated consistent competency performance standard (not weak performers)			Acceptable

No.	Event	Hazard	Consequence *(worst case scenario)*	Existing Controls	Risk			Mitigation Action	Ownership	New Controls	Risk		
					Probability	Severity	Rating				Probability	Severity	Rating
								alleviation being based on suitable performance in previous proficiency check Crew briefing should include Human Factors considerations Prior approval of temporary change to Ops Manual – Part D					

For more details: https://www.icao.int/safety/COVID-19OPS/Pages/QRGs.aspx

2.2.2 Proficiency Check

Pilot proficiency checks ICAO Annex 6, Part I 9.4.4.1

The operator shall ensure that piloting technique and the ability to execute emergency procedures is checked in such a way as to demonstrate the pilot's competence on each type or variant of a type of aeroplane. Where the operation may be conducted under instrument flight rules, the operator shall ensure that the pilot's competence to comply with such rules is demonstrated to either a check pilot of the operator or to a representative of the State of the Operator. Such checks shall be performed twice within any period of one year. Any two such checks which are similar and which occur within a period of four consecutive months shall not alone satisfy this requirement.
Note 1.— Flight simulation training devices approved by the State of the Operator may be used for those parts of the checks for which they are specifically approved.
Note 2.— See the Manual of Criteria for the Qualification of Flight Simulation Training Devices (Doc 9625)

No.	Event	Hazard	Consequence *(worst case scenario)*	Existing Controls	Risk			Mitigation Action	Ownership	New Controls	Risk		
					Probability	Severity	Rating				Probability	Severity	Rating
	Operators may have difficulties complying with proficiency check requirements due to physical distancing policies, the unavailability of flight	Pilot competencies are partially assessed resulting in a potential decrease of pilot minimal acceptable competency standards	Pilots experience difficulties to perform their duties adequately during normal and abnormal situations	Applies to pilots engaged in commercial operations with an operator License must be valid with the appropriate current type/instrument rating			Intolerable	Alternative proficiency check formats to be considered to perform elements of a typical proficiency check: - Increased theoretical training to provide a refresher on knowledge and SOPs including normal and non-normal operations;		Applies to pilots who already have flying experience on the type (not new on the type) Applies to pilots who have demonstrated consistent			Acceptable

No.	Event	Hazard	Consequence *(worst case scenario)*	Existing Controls	Risk			Mitigation Action	Ownership	New Controls	Risk		
					Probability	Severity	Rating				Probability	Severity	Rating
	simulation training devices (FSTDs), and/or inability of personnel to travel to the operator's training facilities etc., as a consequence of the COVID-19 pandemic.			Only for current approved training programs Operators need to justify their need and have established adequate mitigation measures, as a result of a complete risk assessment. Operator must assess the combined effect of multiple alleviations, for example extension of validity of license plus lack of recent experience				-the use of lower level FSTD or other acceptable training devices, in support of assessing the theoretical training and application of SOPs including normal and non-normal operations; and - Line operations to assess the piloting technique in normal operations. Restrictions to operating limitations such as: -reduced crosswind/tailwind -conservative procedures for operations with contaminated runway surface conditions and in severe weather conditions -higher take-off/approach minima -early achievement of stabilized approach criteria		competency performance standard (not weak performers)			

No.	Event	Hazard	Consequence *(worst case scenario)*	Existing Controls	Risk			Mitigation Action	Ownership	New Controls	Risk		
					Probability	Severity	Rating				Probability	Severity	Rating
								-no dispatch with operational MEL items that may unacceptably increase pilot workload, etc. Restrict the conduct of operations based on specific approval items (such as RNP AR), where these require checking during the course of the normal proficiency check Flight crew combinations and pairings, for example avoidance of inexperienced or alleviated crew operating together.					

For more details: https://www.icao.int/safety/COVID-19OPS/Pages/QRGs.aspx

2.2.3 Recent experience

9.4.1 Recent experience — pilot-in-command and co-pilot

9.4.1.1 The operator shall not assign a pilot-in-command or a co-pilot to operate at the flight controls of a type or variant of a type of aeroplane during take-off and landing unless that pilot has operated the flight controls during at least three take-offs and landings within the preceding 90 days on the same type of aeroplane or in a flight simulator approved for the purpose.

9.4.2 Recent experience — cruise relief pilot

9.4.2.1 The operator shall not assign a pilot to act in the capacity of cruise relief pilot in a type or variant of a type of aeroplane unless, within the preceding 90 days that pilot has either:

a) operated as a pilot-in-command, co-pilot or cruise relief pilot on the same type of aeroplane; or

b) carried out flying skill refresher training including normal, abnormal and emergency procedures specific to cruise flight on the same type of aeroplane or in a flight simulator approved for the purpose, and has practised approach and landing procedures, where the approach and landing procedure practice may be performed as the pilot who is not flying the aeroplane.

No.	Event	Hazard	Consequence *(worst case scenario)*	Existing Controls	Risk			Mitigation Action	Ownership	New Controls	Risk		
					Probability	Severity	Rating				Probability	Severity	Rating
	Operators may have difficulties in complying with recency requirements due to reduced flight operations and/or the unavailability of flight simulators as a consequence	Pilots do not have enough recent operational experience in the aeroplane or simulator resulting in a decrease of pilot minimal acceptable competency standards	Pilots experience difficulties to perform their duties adequately in normal and abnormal situations	Applies to pilots engaged in commercial operations with an operator License must be valid with the appropriate current type/instrument rating			Intolerable	When both the recent experience period is extended and the number of take-offs and landings reduced below 3, a higher level of mitigation is required. Partially recent pilots are paired with fully recent pilots.		Applies to pilots who already have flying experience on the type (not new on the type) Applies to pilots who have demonstrated consistent competency performance			Acceptable

No.	Event	Hazard	Consequence *(worst case scenario)*	Existing Controls	Risk			Mitigation Action	Ownership	New Controls	Risk		
					Probability	Severity	Rating				Probability	Severity	Rating
	of the COVID-19 pandemic.			operators need to justify their need and have established adequate mitigation measures, as a result of a complete risk assessment. The alleviations timeframe is limited to a period needed to continue or ramp-up the operation and should be revoked once compliance with the standard can be achieved through normal means (e.g. flight simulators become available again).				Partially recent pilots are paired with fully recent instructors or examiners. Partially recent pilots may be paired with partially recent instructors or examiners. Apply one or more operational limitations to alleviated crew pairings such as: • First sector with the most recent pilot assuming the role of pilot flying; • Reduction in maximum crosswind / tailwind limitations; • Avoidance of contaminated runways / severe weather;		standard (not weak performers) Pilot has a valid rating for the type of aeroplane and the validity of that rating has not been extended using Covid-19 alleviation. At least one pilot of the minimum required flight crew shall be fully recent, unless the PIC is an instructor or examiner			

No.	Event	Hazard	Consequence *(worst case scenario)*	Existing Controls	Risk			Mitigation Action	Ownership	New Controls	Risk		
					Probability	Severity	Rating				Probability	Severity	Rating
								• Higher takeoff / approach minima; • Dispatching only with a functioning autoland system, if installed, or to airports with multiple approach capabilities, including autoland; • Operate with additional flight crew members; • Operate with reduced FDP limits.					

For more details: https://www.icao.int/safety/COVID-19OPS/Pages/QRGs.aspx

Link to EASA guidance for handling exemptions flight crew recent experience:

https://www.easa.europa.eu/document-library/general-publications/guidelines-handling-exemptions-flight-crew-recent-experience

2.2.4 Area, route and aerodrome qualification

Pilot-in-command area, route and aerodrome (ARA) qualification ICAO Annex 6 Part I 9.4.3.5

The operator shall not continue to utilize a pilot-in-command on a route or within an area specified by the operator and approved by the State of the Operator unless, within the preceding 12 months, that pilot has made at least one trip as a pilot member of the flight crew, or as a check pilot, or as an observer in the flight crew compartment:
a). within the specified area; and
b) if appropriate, on any route where procedures associated with that route or with any aerodromes intended to be used for take-off or landing require the application of special skills or knowledge.

9.4.3.6 In the event that more than 12 month elapse in which a pilot-in-command has not made such a trip on a route in close proximity and over similar terrain, within such a specified area route or aerodrome, and has not practised such procedures in a training device which is adequate for this purpose, prior to again serving as pilot-in-command within that area or that route, that pilot must requalify in accordance with 9.4.3.2 and 9.4.3.3.

No.	Event	Hazard	Consequence *(worst case scenario)*	Existing Controls	Risk			Mitigation Action	Ownership	New Controls	Risk		
					Probability	Severity	Rating				Probability	Severity	Rating
	Operators may have difficulties complying with recency requirements due to reduced flight operations or unavailability of FSTD facilities because of	Pilots do not have enough recent operational experience in the aeroplane or simulator resulting in a decrease of pilot minimal acceptable competency standards	Pilots experience difficulties to perform their duties adequately in normal and abnormal situations	Applies to pilots in command engaged in commercial operations with an operator License must be valid with the appropriate current type/instrument rating			Intolerable	Operator implements enhanced dispatch procedures that track ARA changes and implements feedback from other pilots operating in the area/route and/or aerodromes to provide a more		Roster applies to pilot in command who already has significant flying experience on the network Applies to pilot in command who has demonstrated consistent			Acceptable

No.	Event	Hazard	Consequence *(worst case scenario)*	Existing Controls	Risk			Mitigation Action	Ownership	New Controls	Risk		
					Probability	Severity	Rating				Probability	Severity	Rating
	the COVID-19 pandemic.			Operators need to justify their need and have established adequate mitigation measures, as a result of a complete risk assessment. Alleviations should be subjected to operational restrictions in order to reduce flight crew exposure to demanding situations (e.g., severe weather, etc.). Operator must assess the combined effect of multiple alleviations, for example extension of validity of license plus lack of				comprehensive dispatch briefing. Operator to provide flight crew with increased time to enable more comprehensive preflight preparation and planning. Use of distance learning to provide refresher training of knowledge and SOPs including specific normal and non-normal operations into the specific ARA. Substituting recency normally acquired as a flight crew member in an aeroplane or in an approved FSTD, with a lower level of FSTD (e.g., alternative ground training device not qualified in accordance with State standards but still deemed fit for		competency performance standard (not weak performers) Another member of the flight crew meets the ARA recency requirements Roster more experienced flight crew members on flights with a PIC that has expired ARA recency			

No.	Event	Hazard	Consequence *(worst case scenario)*	Existing Controls	Risk			Mitigation Action	Ownership	New Controls	Risk		
					Probability	Severity	Rating				Probability	Severity	Rating
				recent experience The alleviations timeframe is limited to a period needed to continue or ramp-up the operation and should be revoked once compliance with the standard can be achieved through normal means (e.g., flight simulators become available again). The extent of the mitigating measures should be reviewed to take into account the period of time the PIC has not operated into the specific ARA.				purpose by the State) provided that negative training is avoided. Consider the following operational limitations in the risk assessment for the specific ARA operation: • Flight into the specific ARA with the most current pilot assuming the role of pilot flying • Avoiding operations with significant terrain and minimum safe altitudes • Navigational and communication facilities • 2D approach operations • Reduction in maximum crosswind / tailwind limitations					

No.	Event	Hazard	Consequence *(worst case scenario)*	Existing Controls	Risk			Mitigation Action	Ownership	New Controls	Risk		
					Probability	Severity	Rating				Probability	Severity	Rating
								• Avoidance of contaminated runways / severe weather • Use of higher approach / departure minima • Operating with increased crew complement • Consider operations with reduced duty periods or other options limiting fatigue • No operational MEL items that may unacceptably increase pilot workload taking into account the specific ARA					

For more details: https://www.icao.int/safety/COVID-19OPS/Pages/QRGs.aspx

3. Practical applications

This chapter provides practical illustrations of the risks assessment that have been used by AOCs and ATOs to define alternative means of compliance and associated mitigation measures to the traditional training and checking requirements.

The content of this chapter represents the tactical measures that the industry needs to cope with COVID crisis on a short term.

3.1 White paper: Ensuring the quality of training when classroom instruction is delivered via virtual classroom

Document accessible at: https://www.iata.org/pilot-training-licensing

https://www.iata.org/contentassets/c0f61fc821dc4f62bb6441d7abedb076/white-paper---virtual-classroom-instruction.pdf

3.2 Request to conduct Line Check in a simulated environment

Request for a derogation to ORO.FC.230 Recurrent training and checking (c) Line check or CAR–OPS 1.965 Recurrent training and checking (c) to conduct annual line checks in a Level D FSTD rather than the aircraft.

This temporary alleviation is requested in order to assist with the resumption of normal operations during the COVID-19 pandemic, as provided in Article 38 of the Chicago Convention, and in line with temporary exemptions and exceptions as described in the ICAO Safety Oversight Manual (Doc 9734).

This alleviation is required in order to facilitate the conduct of line checks, during the recommencement of normal operations over the coming months, with an unpredictable flying schedule against an ever-growing backlog of annual line checks required.

It is our intention to conduct line checks on the aircraft as much as possible, however we may not be able to meet the demands of the annual line check program, even with the regulatory four-month extension, especially on the XXX fleet.

The objective and conduct of the Line Check will remain as outlined in the Operations manual OM-D, albeit it will be conducted within the FSTD rather than the aircraft. There is no intention for a LOFT style session to be conducted on the crew, however weather conditions and sector choice will be designed to enhance operational context and deliver mitigations to the fact the line check is not conducted on the aircraft. This is in line with ICAO guidance for alleviations.

The outline of the Line Check is as follows:

Evaluator:	Type Rating Instructor as per current Operations manual approvals for Line Checks.
Environment:	Northern Hemisphere Winter operations. LVO departure and arrival not required.
	Cold weather, contaminated, operations from departure airport.
City Pair:	Sector 1: EGLL to EGBB (Captain PF)
	Sector 2: EGBB to EGLL (First Officer PF)
Conduct:	All preplanning and briefing to take place in the simulator Briefing Room
	Full cockpit set-up completed for Sector 1.
	Departure Rwy 27L - Arrival EGBB via RNAV Approach Rwy 33
	'Transit' set-up departure prior to Sector 2.
	Departure Rwy 15 EGBB - Arrival EGLL Rwy 27L.
	Full taxi in and shut-down on stand.

ORO.FC.230 Recurrent training and checking

(a) Each flight crew member shall complete recurrent training and checking relevant to the type or variant of aircraft on which they operate.

(b) *Operator proficiency check*
(1) Each flight crew member shall complete operator proficiency checks as part of the normal crew complement to demonstrate competence in carrying out normal, abnormal and emergency procedures.
(2) When the flight crew member will be required to operate under IFR, the operator proficiency check shall be conducted without external visual reference, as appropriate.
(3) The validity period of the operator proficiency check shall be six calendar months. For operations under VFR by day of performance class B aeroplanes conducted during seasons not longer than eight consecutive months, one operator proficiency check shall be sufficient. The proficiency check shall be undertaken before commencing commercial air transport operations.
(4) The flight crew member involved in operations by day and over routes navigated by reference to visual landmarks with another-than complex motor-powered helicopter may complete the operator proficiency check in only one of the relevant types held. The operator proficiency check shall be performed each time on the type least recently used for the proficiency check. The relevant helicopter types that may be grouped for the purpose of the operator proficiency check shall be contained in the operations manual.
(5) Notwithstanding ORO.FC.145(a)(2), for operations of other-than complex motor-powered helicopters by day and over routes navigated by reference to visual landmarks and performance class B aeroplanes, the check may be conducted by a suitably qualified commander nominated by the operator, trained in CRM concepts and the assessment of CRM skills. The operator shall inform the competent authority about the persons nominated.

(c) ***Line check***
(1) Each flight crew member shall complete a line check on the aircraft to demonstrate competence in carrying out normal line operations described in the operations manual. The validity period of the line check shall be 12 calendar months.
(2) Notwithstanding ORO.FC.145(a)(2), line checks may be conducted by a suitably qualified commander nominated by the operator, trained in CRM concepts and the assessment of CRM skills.

(d) *Emergency and safety equipment training and checking*
Each flight crew member shall complete training and checking on the location and use of all emergency and safety equipment carried. The validity period of an emergency and safety equipment check shall be 12 calendar months.

(e) *CRM training*
(1) Elements of CRM shall be integrated into all appropriate phases of the recurrent training.
(2) Each flight crew member shall undergo specific modular CRM training. All major topics of CRM training shall be covered by distributing modular training sessions as evenly as possible over each three-year period.

(f) Each flight crew member shall undergo ground training and flight training in an FSTD or an aircraft, or a combination of FSTD and aircraft training, at least every 12 calendar months.

(g) The validity periods mentioned in (b)(3), (c) and (d) shall be counted from the end of the month when the check was taken.
(h) When the training or checks required above are undertaken within the last three months of the validity period, the new validity period shall be counted from the original expiry date.

No.	Event	Hazard	Consequence *(worst case scenario)*	Existing Controls	Risk			Mitigation Action	Ownership	New Controls	Risk		
					Probability	Severity	Rating				Probability	Severity	Rating
	Conduct periodic "Line Checks" in Full Flight Simulator (FFS) environment due to operational restrictions as a result of the COVID-19 pandemic	Line Checks conducted in the FFS do not accurately represent conditions under which a "Commercial revenue Flight" would be conducted	Limitations of FFS environment reduce evaluation of "realistic" operating environment which a line crew under assessment would be exposed to	All pilots remain within their current "line check datum" All pilots have completed, in accordance with operator policy, a line check within the previous 12 (24 for ATQP) months cycle	IMPROBABLE (2)	MINOR (D)	ACCEPTABLE (2D)	Prior to FFS Line Check, pilots have conducted as a minimum, either: 1)Line sectors on the aircraft as PF and/or as PM, And/Or 2) an FFS recurrent training session	Training Standards Managers		IMPROBABLE (2)	MINOR (D)	ACCEPTABLE (2D)

No.	Event	Hazard	Consequence *(worst case scenario)*	Existing Controls	Risk			Mitigation Action	Ownership	New Controls	Risk		
					Probability	Severity	Rating				Probability	Severity	Rating
	Conduct periodic "Line Checks" in Full Flight Simulator (FFS) environment due to operational restrictions as a result of the COVID-19 pandemic	Line Checks conducted in the FFS do not accurately represent conditions under which a "Commercial revenue Flight" would be conducted	Pilot evaluation unable to identify "latent" lapses in performance when conducted under "synthetic" as opposed to "line" conditions	All pilots are within their current "revalidation datum" All pilots have completed, in accordance with operator policy, the recurrent training program sessions	IMPROBABLE (2)	MINOR (D)	ACCEPTABLE (2D)	1)Line check failures (per year) over the last period of reference is below 1% across the operator's fleets And 2) All numerical failure values are single digit per year and per fleet And 3) the number of line checks per year is statistically relevant (thousands of line checks per year)	Training Standards Managers		IMPROBABLE (2)	MINOR (D)	ACCEPTABLE (2D)

No.	Event	Hazard	Consequence *(worst case scenario)*	Existing Controls	Risk			Mitigation Action	Ownership	New Controls	Risk		
					Probability	Severity	Rating				Probability	Severity	Rating
	Conduct periodic "Line Checks" in Full Flight Simulators (FFS) environment due to operational restrictions as a result of the COVID-19 pandemic	Line Checks conducted in the FFS do not provide the "dynamic" reality of the "line operations" e.g., limited ATC, traffic, etc.	Pilot evaluation under "normal" line flying conditions reduced Pilots not observed under such conditions	All FFS have the functionality to add "random" TCAS traffic and "chatter" creating additional "operating scenario" environment Instructors are specially trained to provide maximum of operational realism during the FFS	IMPROBABLE (2)	MINOR (D)	ACCEPTABLE (2D)	1)Communication to instructor to reinforce the Observable behavior OB 3.5 "Sustains operational relevance and realism" (belongs to the Instructor competency "Instruction") And 2) Additional training would be provided in the event the simulated "line check" is not achieved at the required standard, And 3) Pilots demonstrating poor performance during the simulated "line check" would not be permitted to go back to line operations without further remedial training	Training Standards Managers		IMPROBABLE (2)	MINOR (D)	ACCEPTABLE (2D)

No.	Event	Hazard	Consequence *(worst case scenario)*	Existing Controls	Risk			Mitigation Action	Ownership	New Controls	Risk		
					Probability	Severity	Rating				Probability	Severity	Rating
	Conduct periodic "Line Checks" in Full Flight Simulators (FFS) environment due to operational restrictions as a result of the COVID-19 pandemic	Loss of "technical" review and "mandatory item" review opportunity as line check is not conducted in an aircraft	Pilot evaluation does not cover the technical and mandatory item review during the FFS session	Recurrent training events are composed with "discussion topics" that are available to all pilots in each smart briefing package	IMPROBABLE (2)	MINOR (D)	ACCEPTABLE (2D)	1)The regular pre-simulator briefing period is extended to have enough time to cover the line check phase training requirements at the satisfaction of the instructor-evaluator	Training Standards Managers		EXTREMELY IMPROBABLE (1)	MINOR (D)	ACCEPTABLE (1D)

No.	Event	Hazard	Consequence *(worst case scenario)*	Existing Controls	Risk			Mitigation Action	Ownership	New Controls	Risk		
					Probability	Severity	Rating				Probability	Severity	Rating
	Conduct periodic "Line Checks" in Full Flight Simulator (FFS) environment due to operational restrictions as a result of the COVID-19 pandemic	Loss of "knowledge" due to time away from operating environment	Pilot evaluation demonstrates "knowledge" gaps with potential errors	Recurrent "e-learning environment" continued during the period aircraft grounded	IMPROBABLE (2)	MINOR (D)	ACCEPTABLE (2D)	1)The regular pre-simulator briefing period is extended to have enough time to cover the line check phase training requirements at the satisfaction of the instructor-evaluator	Training Standards Managers		EXTREMELY IMPROBABLE (1)	MINOR (D)	ACCEPTABLE (1D)

3.3 Alternative means of compliance to a specific national pilot recency requirement.

This example has been kindly provided by Air Canada to illustrate a situation where an alternative mean of compliance is necessary to comply with a specific national pilot recency requirement. The specific requirement states that within the previous 90 days a pilot must have completed at least one sector assigned to duty as a flight crew member in an aircraft of that type and is additional to the ICAO Annex 6 standard related to recent experience.

Note: ICAO Annex 6 standard 9.4.1 Recent experience — pilot-in-command and co-pilot

9.4.1.1 The operator shall not assign a pilot-in-command or a co-pilot to operate at the flight controls of a type or variant of a type of aeroplane during take-off and landing unless that pilot has operated the flight controls during at least three take-offs and landings within the preceding 90 days on the same type of aeroplane or in a flight simulator approved for the purpose.

Title:	**Pilot Recency**
CAR:	705.106(1)(b)(i) "Within the previous 90 days, has completed at least…one sector assigned to duty as a flight crew member in an aircraft of that type,"
CASS:	N/A
Guidance Material:	R745.106(1)(b) "A sector is comprised of a takeoff, departure, arrival and landing including a cruise segment of at least 50 nautical miles."
Technical Publication:	N/A
COM Part(s) and Reference(s):	FOM 5.3.10.3 Aircraft Recency Requirements
Problem Statement:	FOM 5.3.10.3 stipulates that Chief Pilots may authorize recency in accordance with CARs. **705.106(1)(b)(i) states that within the previous 90 days a pilot must have completed at least one sector assigned to duty as a flight crew member in an aircraft of that type.** Air Canada has experienced a >90% reduction in flying since mid-March, with some fleets being affected more than others. The lack of flight sectors is resulting in pilots being unable to maintain recency. While pilots are able to receive credit for three takeoffs and landings when completed in a Level D full flight simulator, there is not enough available flying for all pilots to receive one sector assigned duties as a flight crew member in an actual aircraft, within the previous 90 days.
Alternative Mean of Compliance (AMoC):	To meet the requirement for at least one sector assigned to duty as a flight crew member in an aircraft of that type, outlined in 705.106(1)(b)(i), as an alternate means of compliance: • Pilots may complete a one-sector LOFT exercise conducted in a level D Full Flight Simulator of the type that the pilot is assigned to duties on. • The LOFT is to be operated in real time and include all phases of flight from Preflight to Termination. This gate-to-gate LOFT

	scenario is operated on a route with a cruise segment of at least 50nm, consistent with the guidance in R745.106(1)(b). YUL-YOW is the likely routing for this exercise, although other routings with a cruise segment of at least 50nm cruise may be used. (Note: the actual track distance of YUL-YOW is 82nm). • The LOFT script includes RTO, engine failure on take-off, RNAV approach and visual circuit and approach for each candidate, while each candidate completes three takeoffs and landings. • If any item is not to the required level of proficiency it must be repeated. If the level of proficiency is not reached the candidate is not returned to the line until additional training is completed. • Successful completion of the LOFT will constitute as a sector for credit as required in 705.106(1)(b)(i) for both the PF and PM. From the date of successful completion, the pilots' recency will be re-set for 90 days.
Statement of Risk / Equivalent Level of Safety:	In accordance with the RA conducted by Air Canada Flight Operations we are satisfied that the risk of alternate means of compliance during the COVID-19 crisis is acceptable. For the purpose of temporary relief during the COVID-19 situation, the AMoC described above provides an equivalent level of flight safety to the regulatory requirement for a sector to be completed on a line flight. Air Canada is submitting a request for an AMoC to meet the requirement for a pilot to operate one sector in the previous 90 days. This relief is needed due to the unprecedented reduction of flying in our operation due to the COVID-19 crisis. We do not take this request lightly and strive to maintain our level of safety and proficiency of our crews. We have been operating an Advanced Qualification Program (AQP) for over 20 years and have 20 years of collected data from our training program which is reviewed for trends. While our data indicates that our training program is doing well, and pilot proficiency is at the level we expect, there are some items which have slightly lower average scores. Non-precision approaches (RNAV (GNSS)) and visual maneuvering to visual approaches are items that we feel, and our data supports, are good items to focus on during this unique time. For this reason, the simulator session that is being used for doing three takeoffs and landings includes these items. Additionally, the session includes RTO and V1 cut which are also items that are not required for takeoff and landing recency but are beneficial for crew confidence and demonstration of proficiency. This session allows us to do an overall assessment of the candidate. When looking at ways of using the simulator as an alternate means to meet the requirement for a sector in the aircraft, we looked at what would best demonstrate a sector, and if PF and PM duties would be required. The CAR only requires one sector and there is no requirement for both PF and PM duties. We propose a single sector LOFT in the simulator as it can flown identically to how it would be in the aircraft. It can be done "real-time" without any shortcuts. Our data does not show that there is any tendency for there to be issues with these normal operations, so we do not see the need to do two sectors. The one sector LOFT allows the crew to demonstrate that they are comfortable operating in a realistic, real time environment. When it comes to PF and PM skills, we feel that we go above

	and beyond in the takeoff and landing exercise that will be paired with the recency LOFT. In this exercise the pilots demonstrate both PF and PM duties in FMC programming, emergency and normal procedures and automated and manual flying skills. We feel that the proposed AMoC makes the best use of a four-hour simulator session and ensures that crews are proficient for continued line operations for a 90-day period. Given the complexity and uniqueness of our AQP, we believe that approving this AMoC is in the public interest during the COVID-19 crisis. We further believe that our pilots will appreciate the benefits of this request and the ongoing high level of competency this request would afford them.

4. Best practices

This chapter provides best practices that the IATA Pilot Training Task Force members have implemented during COVID-19 for their flight crew training.

The content of this chapter is also related competency-based training as a strategic solution to enhance training effectiveness to support post COVID-19 return to operations.

4.1 Sanitization procedures

Entry into the training facilities

- Entry to the facility is limited through one door to enable temperature screening of all occupants. A sticker is placed on ID badges to verify completion of temperature in accordance with the World Health Organization recommendations and the state legislation.
- All personnel entering the training must respect the published health protocol.
- Instructors and crews/trainees to wash hands or use hand sanitiser upon entering the training facilities.
- General application of social distancing rule of 2-metres/6 feet. (See details in the sections below)
- No handshaking.

Disinfecting training areas and hygiene measures

Generality: The frequency of routine cleaning of flight simulators and training devices and other training aids, or equipment used during training (including oxygen masks) should be increased. Cleaning products used should be compatible with COVID-19 disinfectants.

Classroom

- Disinfectant, cleaning solutions, wipes and gloves stocked in all classrooms/briefing rooms.
- Instructors and crews/trainees are required to clean station upon entry of class/briefing sessions. Instructors to ensure crews have cleaned their station.
- Instructors and crews/trainees are required to clean station at end of class/briefing sessions. Instructors to ensure crews have cleaned their station.
- Deeper cleaning/disinfecting conducted during overnight.

Simulator

- Hand washing before and after the session, and during the break.
- OEM-approved disinfectant and cleaning supplies stocked for each flight training device/safety equipment and cleaned by instructors and crews/trainees at the beginning and end of training period; ensuring shared throttles\controls and panels are well disinfected. Avionics/display screens to be cleaned with wipes provided in the device.
- 30-minute break between crew changes in the simulators to allow for cleaning to be done by the cleaning crew.
- Additional cleaning and disinfecting of common areas throughout the day in the sim facilities.
- Deeper cleaning/disinfecting conducted by simulator technicians during overnight.

Aircraft in the context of flight school

- Instructors clean their section of flight deck in accordance with cleaning protocols, using cleaning supplies provided. They ensure students have cleaned their section of the flight deck.
- Students clean their section of flight deck in accordance with cleaning protocols with supplies provided. They ensure shared throttles/controls are well disinfected.

Physical distancing

Classroom

- Classrooms used at 50% capacity only.
- Physical distancing rule of 2-metres/6 feet applies.
- Laser pointer or stick are used to interact with the training aids such as posters and mock-ups.

Simulator

- Specific order for the crew members to enter the simulator, e.g., Captain first, when seated, First Officer walks in, when seated, instructor walks in.
- Maximize distance between instructor and crews/trainees, and between the crews/trainees themselves, e.g., instructor to use stick pointer to highlight areas of the cockpit to training crews.
- If technical support is required, the technician waits until the entire crew exits the simulator before entering to investigate the problem. The crew only re-enters the SIM when the technician has left.
- Technician can answer questions from the crew maintaining a distance of 2m/6ft from each other.
- No more than 1 technician per call.
- Specific order for the instructor and crews/trainees to exit the FSTD at end of the session.

Aircraft in the context of flight school

- Maintain 2m/6ft distance during checks.
- For dual flight, instructor to enter aircraft first followed by crews/trainees.

Masks

Classroom

- Facial masks recommended or required as per state directives

Simulator - Facial masks

- Pilots are required to wear facial masks coverings (N95 mask, surgical mask or cloth mask) at all times in the simulator and when not able to adhere to social distancing policies (2m/6ft).
- In order to maintain control of supply, the facial masks are pre-positioned in the simulator/FTD. Everybody should plan to use only one mask per day.
- Facial Masks are obligatory during Cabin Emergency Evacuation Trainer CEET / mock-up training, as minimum distances cannot be kept.

Simulator - Aircraft oxygen mask to provide supplemental oxygen

- No use or minimized use of aircraft oxygen masks or headsets in the simulator, while following local training authority directives.
- Specific exercises that mandates the usage of the aircraft oxygen mask have been modified to simulate the mask adjustment on the face and its usage. In that case the instructor will provide specific briefing on the oxygen mask functionalities such as 100%/ norm use, reset the boom mic after using the masks, etc.).

Aircraft in the context of flight school

- All occupants wear facial masks.

Lunches

- Takeout food only from on-site cafeteria. No dine-in allowed.

Checklist for signs of sickness

- Checklist provided to instructors to follow in the event that a student shows signs of sickness or becomes ill during training.

Annex 1 Examples from flight training organizations

COVID19 protocol for CAE training centres

This protocol describes how to manage the interactions between CAE Instructors, Customer Trainees and CAE Simulator Maintenance Technicians.

COVID-19 Protocol for Training Centres

This protocol describes how to manage the interactions between CAE Instructors, Customer Trainees and CAE Simulator Maintenance Technicians.

CAE

At all times

- Apply social distancing rules (2-metres/6 feet distance with training crew & maintenance crew).
- If you need to sneeze or cough, you must bend your elbow and sneeze/ cough into it or cover your mouth and nose with tissues or a face cover.
- If you develop warning signs of COVID-19 (fever, shortness of breath, coughing), contact your manager as soon as possible so the situation can be evaluated and appropriate measures taken.
- Ensure adequate cleaning supplies are available to the training crew.

CAE Instructor
Customer Trainees
Simulator maintenance technician

1. Arrival at CAE

- Follow health declaration guidelines.
- Wash your hands (hand sanitizer and\or soap & water) upon entering the facility & apply social distancing rules.
- Greet with 2-metres/6 feet distance without shaking hands.

- Sign declaration form and place it in the box.
- Greet with 2-metres/6 feet distance without shaking hands.
- Wash your hands (hand sanitizer and\or soap & water) upon entering the facility & apply social distancing rules.

- Wash your hands (hand sanitizer and\or soap & water), clean desk area and personal belongings upon entering CAE.

2. Health & Safety COVID19 Protocol Briefing

- While maximizing distance with customer trainees/students, review health and safety protocol for the current training session.
- Identify location of cleaning supplies.
- Use laser pointer or stick to interact with the training aids such as posters and mock-ups.
- Should you be assigned to seat support function, please refer to the seat support protocol.

- While maximizing distance with instructor and other training crew members, pay attention to health and safety protocol for the current training session.

3. Briefing

- Follow social distancing rules (2m/6ft separation) during briefing sessions.

- Follow social distancing rules while moving around training facility.

4. Entering the simulator

- Strictly follow the entrance sequence: Captain first, when seated, First Officer walks in, when seated, Instructor walks in.

- If a call needs to be taken, the technician waits until the entire crew exits the simulator before entering the cockpit for investigation of the problem.
- The crew can re-enter the cockpit only upon the exit of the technician. If any questions need to be answered, the technician and the crew shall maintain a distance of 2m/6ft from each other.
- No more than 1 technician per call

5. Inside simulator

- Clean the entire instructor workspace using cleaning supplies provided and confirm training crews have cleaned their workspace areas.
- Avoid social chat when in simulator

- Clean workspace with supplies provided.
- Ensure shared throttles\controls and panels are well disinfected.
- Avoid social chat when in simulator

6. During session in the simulator

- Maximize distance with training crew (ex.: stick pointer to highlight areas of the cockpit to training crews).

- Maximize distance with other trainees & instructor.
- Minimize oxygen masks usage while following local training authority directives.
- It is recommended that each individual bring their own headset

Reminder: You must remain seated with your seatbelt fastened at all times in a FFS with motion engaged.

7. After session

- Clean the entire instructor workspace using cleaning supplies provided and make sure customer trainees\students have cleaned their areas of the cockpit.
- Instructor will ask the crew to stow the oxygen masks at the end of the session (if applicable).

- Clean workspace with supplies provided.
- Ensure shared throttles\controls and panels are well disinfected.

8. Exiting the simulator

Strictly follow the exit sequence:

- Instructor first,
- Followed by First Officer,
- Followed by Captain.

- Ensure that any simulator parts that have been touched are sanitized prior to exiting simulator.

9. Before debriefing

- Wash your hands (hand sanitizer and\or soap & water) and apply social distancing rules.

10. Debriefing

- Use laser pointer or stick to interact with the training aids such as posters and mock-ups.
- Apply social distancing rules, (2m/6ft separation) during briefing and debriefing sessions.

11. Leaving CAE

- Sanitize desk and personal belongings.

Last revised: April 13th, 2020

COVID-19 protocol for CAE's flight training academies

COVID-19 Protocol for CAE's flight training academies

CAE

At all times

- Follow social distancing rules (2 metres/ 6 feet distance with instructors, students & maintenance crew).
- If you need to sneeze or cough, you must bend your elbow and sneeze/ cough into it or cover your mouth and nose with tissues or a face cover.
- If you develop warning signs of COVID-19, contact your manager/ security as soon as possible so the situation can be evaluated and appropriate measures taken.
- Ensure adequate cleaning supplies are available.

Flight Instructor
Students
Aircraft Maintenance Personnel

1. Arrival at the Training Facility

- Wash your hands upon entering the facility or use hand sanitiser & follow social distancing rules.
- Greet others with a 2-metres/6 feet distance without shaking hands.

- Wash your hands upon entering the facility or use hand sanitiser & follow social distancing rules.
- Sign declaration form and place it in the box.
- Greet others with a 2-metres/6 feet distance without shaking hands.

- Wash your hands upon entering the facility & follow social distancing rules.

2. Health & Safety COVID19 Protocol Briefing

- While keeping 2m/6ft distance with students, review health and safety protocol for the current training session.
- Identify location of cleaning supplies.
- Use laser pointer or stick during briefings to interact with the training aids such as posters and mock-ups.

- While keeping 2m/6ft distance with instructor and other students, pay attention to health and safety protocol for the current training session.

3. Pre flight briefing and Dispatch

- Follow social distancing rules (2m/6ft distance).
- Put on face cover prior to entering airside area.

4. Pre flight check and entering the aircraft

- Maintain 2m/6ft distance during checks.
- For dual flight - Instructor to enter aircraft first followed by student.

- If an issue arises on the ramp, the engineer waits until the crew exits the aircraft before entering to investigate the problem. The crew can re-enter the aircraft once the engineer has exited. If any questions need to be answered, the engineer and the crew shall maintain a distance of 2m/6ft from each other.

5. Inside aircraft

- Instructor must clean their section of flight deck in accordance with cleaning protocols using cleaning supplies provided and instructor to confirm student has cleaned their areas.
- Ensure shared throttles/controls are well disinfected.

- Clean section of flight deck in accordance with cleaning protocols with supplies provided.
- Ensure shared throttles/controls are well disinfected.

6. In the aircraft

- All occupants wear face cover and minimise contact with shared surfaces.

7. After flight activity

- Clean their section of flight deck in accordance with cleaning protocols using cleaning supplies provided.
- Ensure student has cleaned their training areas.

- Clean flight deck with supplies provided.
- Ensure shared throttles/controls are well disinfected.

8. Exit aircraft and return to Dispatch

- Follow social distancing rules (2m/6ft distance).

- Ensure that any external aircraft parts touched are sanitized upon exiting aircraft.
- Follow social distancing rules (2m/6ft distance).

9. Before debriefing

- Remove face cover (put it in garbage if disposable type)
- Wash your hands (hand sanitizer and/or soap & water) and follow social distancing rules (2m/6ft distance).

10. Debriefing

- Follow social distancing rules (2m/6ft distance).
- Use laser pointer or stick to interact with the training aids such as posters and mock-ups.

11. Leaving CAE

- Follow social distancing rules (2m/6ft distance).

Last revised: April 1, 2020

CAE Inc. Proprietary Information and/or Confidential information

AETC COVID 19 Procedure - Airbus

AETC COVID 19 Procedure

By SLTEF V1.0 07/04/20

AIRBUS

COVID GOLDEN RULES

- Cough and sneeze into a tissue or elbow
- Avoid shaking hands
- Wear mask to protect others if you feel sick
- Wash your hands thoroughly and regularly
- Keep your distance (1m at least)

Crew
Instructor
Technician
Cleaning team

Note: Instructors must be familiar and apply the "AETC COVID-19 Procedure" and "Instructor COVID-19 Check-List"

1. **Arrival at the Training Center:**
   Crew: *Apply COVID Golden Rules*

Airbus Training Centre Toulouse

2. **Briefing room:**
   Instructor: apply COVID AIB Instructor C/LIST
   Take the assigned COVID-Kit in the storage box or SLTEF office. Remind the *COVID Golden Rules* to the trainees
3. **Walking in the Training Centre:**
   Crew: Apply COVID essential barriers

Airbus APT or FFS

4. **Entering the simulator:**
   Cleaning team: don't forget to complete the follow-up form after cleaning completed
   Instructor: check the cleaning follow-up form before entering
   Crew: Strictly follow the entrance sequence decided during the briefing: trainee1, then trainee 2, and the instructor. Keep your distance.
   Technician: the technician must wait that all the crew leave the simulator before entering the cockpit.
5. **Inside the simulator:**
   Crew: Clean the entire workspace if necessary with the cleaning supplies provided in the COVID-kit.
6. **During session in the simulator:**
   Crew: masks and gloves wearing is recommended. After each repositioning, the crew could clean shared throttles/controls and wash hands if necessary
7. **After session:**
   Crew: all the crew and disinfected material must be removed from the cockpit. Strictly follow the exit sequence: instructor, then trainee 2 and trainee1.keep your distance
8. **Exiting the simulator:**
   Crew: do not leave in the FFS used protection supplies.
   strictly follow the exit sequence: instructor first, then trainee1 and trainee2.
   Cleaning team: proceed to FFS disinfection procedure for next course.

9. **Before debriefing:**
   Instructor
   Crew: Wash your hands (hand sanitizer and/or soap & water)
10. **At/After Debriefing:**
    Instructor: after the debriefing, according time hours drop off the COVID kit at SLTEF office or at TSO
    Crew: Apply *COVID Golden Rules*

Instructor Emergency contact: +33 6 07 46 60 12

11. **Leaving the Training Center:**
    Crew: Apply COVID essential barriers

4.2 White Paper: Refresher Competency-Based Training and Assessment (CBTA) and Evidence-Based Training (EBT) Session for "Post COVID" Operational Recovery, Edition 2

Document accessible at: https://www.iata.org/pilot-training-licensing

Or by copying directly into your browser the following link:
https://www.iata.org/contentassets/c0f61fc821dc4f62bb6441d7abedb076/white-paper-refresher-cbta-session-for-post-covid-operational-recovery.pdf

4.3 White Paper: ATO-AOC Partnership Including Instructor Provisioning

Document accessible at: https://www.iata.org/pilot-training-licensing

Or by copying directly into your browser the following link:
https://www.iata.org/contentassets/c0f61fc821dc4f62bb6441d7abedb076/ato-aoc-partnership-covid-19-return-to-operations.pdf